SunChemical

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January 31, 2003

Mr. Seth Ausubel
Remedial Project Manager
United States Environmental Protection Agency
Region II
Emergency and Remedial Response Division
290 Broadway, 19th Floor
New York, NY 10007-1866

Re: Sun Chemical Corporation's Response to EPA's Request for Information Regarding the Berry's Creek Study Area

Dear Mr. Ausubel:

This letter responds to the October 17, 2002 Request for Information ("Request") submitted by the United States Environmental Protection Agency ("EPA") to Sun Chemical Corporation ("Sun"). The Request seeks information pertaining to the Berry's Creek Study Area ("Study Area") in Bergen County, New Jersey, specifically facilities located at 390 and 397 Central Avenue in East Rutherford, New Jersey (collectively the "Central Avenue Facilities" or "Facilities"). Sun requested and was granted by Clay Monroe of the Office of Regional Counsel an extension until January 24, 2003 to respond to the Request.

General Objections

Sun asserts the following general objections to the Request.

Time for Response. Sun objects to the time allowed by EPA to respond to the Request, as such time is insufficient, given the breadth of the questions, the volume of documents that must be searched, and the extended time period for which information is sought.

The Request is Overly Broad and Unduly Burdensome. Sun objects to the Request because the scope of the Request is so overbroad and unduly burdensome that it simply cannot be justified. First, the Request calls for information that is not related to the Study Area or the

Central Avenue Facilities. Second, the Request seeks information regarding activities at a level of detail that is impossible to provide without extreme burden, if at all. Many of the activities that are the subject of the Request took place ten, twenty or thirty-or-more years ago. Many of the individuals who may have limited knowledge regarding some of the activities to which the Request refers are no longer – or were never – employed by Sun. Those individuals who are currently employed by Sun do not have knowledge at the level of detail requested. Third, the Request is not limited to a specific time frame and is therefore completely overbroad. For example, it is impossible for Sun to recount each and every activity and each and every material used at the Facility for an undefined period of time. Fourth, much of the information sought by the EPA is duplicative of information already in EPA's possession, custody and/or control and, to that extent, is burdensome. The Berry's Creek Study Area has been the subject of investigation by EPA for a significant period of time.

Privileged Information. Sun further objects to the Request to the extent it seeks information protected from disclosure by the attorney-client privilege, the attorney work product doctrine, the joint defense privilege and any other legally cognizable privilege.

The Request Exceeds the Scope of EPA's Authority. In several respects, the Requests exceed the scope of EPA's authority granted under Section 104(e). Specifically, to the extent that the Request seeks information not related to the hazardous substances that are alleged to be connected with the Study Area, seeks information concerning operations at a facility other than the Central Avenue Facilities without regard to whether such activities are relevant to the Study Area, seeks information pertaining to Sun entities without any connection to the Study Area, and seeks a certification as related to this response, the Request is overly broad and exceeds EPA's authority under Section 104(e).

Objections to Definitions

Sun further submits the following objections to the Definitions contained in the Request.

"The Company" and "Your Company." This definition is overly broad because of the requirement to identify each "subsidiary or affiliate," the "name(s) and address(es) of each such entity's President, Chairman of the Board, and Chief Executive Officer," as well as "the state and date of incorporation and the agent for service of process" for each such entity regardless of whether the subsidiary, division or branch had any relationship with the Study Area or Facility. Sun responds to the questions below for the Central Avenue Facilities. Sun has not included in this response any information pertaining to other Sun facilities or to facilities that are clearly irrelevant to the Request.

"Waste" or "Wastes." This definition is overly broad, vague and ambiguous and exceeds the scope of material regulated pursuant to CERCLA. Further, the definition is objectionable as a compound statement from which an affirmative response as to one characteristic or component

of the definition might be construed to include all such characteristics or components. In responding to EPA's Request, Sun reserves all arguments concerning the nature of the material used by it.

"Industrial Waste." This definition is overly broad, vague and ambiguous and calls for speculation. Further, the definition is objectionable as a compound statement from which an affirmative response as to one characteristic or component of the definition might be construed to include all such characteristics or components. In responding to EPA's Request, Sun expressly reserves all arguments concerning the nature of the material used by it.

Introductory Statement

To clarify the position taken and objections rendered by Sun in the Response, it is useful to understand the relevant history and operations at the two (2) Central Avenue Facilities.

The facility located at 390 Central Avenue was purchased by Sun Chemical Corporation in or around 1937 from Fuchs and Lang. At the time of purchase, the facility operated as General Printing Ink ("GPI"), and Sun maintained that designation. On December 31, 1986, SUN/DIC Acquisition Corporation ("SUN/DIC") purchased the Sun Chemical name and the graphic arts materials business, including GPI and the 390 Central Avenue facility. Shortly thereafter, the former Sun Chemical Corporation ("former Sun") changed its name to Sequa Corporation, and SUN/DIC changed its name to Sun Chemical Corporation. Until 1991, a variety of printing inks and varnishes were made at the facility. In or after 1991, the facility began manufacturing black newsprint inks only. On January 23, 1993, Sun purchased United Millmaster Onyx Group, which operated United States Printing Ink. On December 15, 1993, the news ink manufacturing portion of the GPI Division of Sun, which included the facility at 390 Central Avenue, was combined with and began operating under US Ink Corporation , a wholly owned subsidiary of Sun. On January 1, 1997, US Ink Corporation was merged with Sun, and US Ink became one of Sun's unincorporated divisions.

The facility located at 397 Central Avenue houses a small pilot plant operated by GPI, an unincorporated division of Sun. Sun leases the approximately 2000-square-foot facility from Sequa. Since approximately the 1950s, the facility has operated as a GPI pilot plant. When SUN/DIC purchased GPI from former Sun on December 31, 1986, the pilot plant continued to operate as a GPI facility.

Response to the Request

Without waiving its general or specific objections, Sun responds to the Request as follows:

1. (a) State the correct legal name and mailing address of your Company.

Sun Chemical Corporation, 222 Bridge Plaza South, Fort Lee, New Jersey 07024

(b) Identify the legal status of your Company (corporation, partnership, sole proprietorship, specify if other) and the state in which your Company was organized or formed.

Sun is a corporation organized in the State of Delaware.

(c) State the name(s) and address(es) of the President, Chairman of the Board, and the Chief Executive Officer of your Company.

Wes William Lucas, President, CEO and Chairman of the Board, Sun Chemical Corporation, 222 Bridge Plaza South, Fort Lee, New Jersey 07024

(d) If your Company is a subsidiary or affiliate of another corporation, or has subsidiaries, identify each such entity and its relationship to your Company, and state the name(s) and address(es) of each such entity's President, Chairman of the Board, and Chief Executive Officer.

Sun specifically objects this question as overbroad because it requests information about entities that had no relationship to Berry's Creek or the Central Avenue Facilities. Subject to and without waiving its objections, Sun responds that the only divisions of Sun that have any relationship to the Central Avenue Facilities are GPI and US Ink, each of which are unincorporated divisions of Sun.

(e) Identify the state and date of incorporation and the agent for service of process in the state of incorporation and in the State of New Jersey for your Company and for each entity identified in your response to question 1.d., above.

See response to 1(b) above. Sun Chemical Corporation was incorporated as a Delaware corporation on December 1, 1986 as Sun/DIC Acquisition Corporation and shortly thereafter changed its name to Sun Chemical Corporation. CT Corporation is Sun's agent for service of process in both New Jersey and Delaware.

(f) If your Company is a successor to, or has been succeeded by another entity, identify such other entity and provide the same information requested in question 1.e., above.

See introductory statement above.

2. Provide a description of the Site, i.e., the property or properties in East Rutherford, Bergen County, New Jersey, which your Company owned or owns, or upon which it

operated or leased, or currently operates or leases. Include Block and Lot numbers, names of streets or physical features bounding the property(ies), and acreage.

Sun specifically objects to this question to the extent it seeks information regarding facilities that have no relation to Berry's Creek and/or the Central Avenue Facilities. Subject to and without waiving its objections, Sun responds as follows:

390 Central Avenue Facility. The site is approximately 2.5 acres in size and is known on the tax map as Block 34, Lot 1. It is bounded by three adjacent streets: Herman Avenue on the east, Grove Street on the south and Central Avenue on the north. On the west, the site is adjacent to two New Jersey Transit rail lines that are used for passenger and freight transportation.

397 Central Avenue Facility. This facility is located within a leasehold of approximately 2000 square feet. It is part of a larger facility owned by Sequa Corporation. It is bounded by Central Avenue on the South and Herman Avenue on the East and is known as Block 29, Lot 3 on the tax map.

3. Provide a narrative description of the nature of the Company's business. If the nature of the Company's business changed over time, please explain how it changed (including any name changes) and approximately when the changes occurred.

Sun specifically objects to this question to the extent it seeks information regarding any aspect of Sun's business that is unrelated to operations at the Central Avenue Facilities. Subject to and without waiving its objections, Sun responds that it is a manufacturer of inks, coatings and organic pigments. The US Ink facility located at 390 Central Avenue manufactured a variety of inks and varnishes until 1991, when the facility began manufacturing black newsprint inks only. Most inks manufactured at the 390 Central Avenue Facility are oil-based letterpress and offset inks, but the Facility manufactures a small amount of flexographic (water-based) inks.

Since the 1950s, the GPI facility located at 397 Central Avenue has operated as a pilot plant, developing polymers, coatings, and pigments. In or around the 1980s, the GPI facility ceased developing pigments and now develops polymers and coatings only.

4. Please specify the time period during which the Company leased, owned, and/or operated the Site. If the Company leased, owned or operated at portions of the Site, specify the time periods of such involvement, and appropriate block and lot numbers. If your Company ever leased the Site, provide copies of leases, names, current addresses and telephone numbers of each owner of the Site during the period the Company leased the Site.

Sun specifically objects to this question as overbroad and beyond the permissible scope of inquiry under Section 104(e) of CERCLA. Subject to and without waiving its objections, Sun responds as follows:

390 Central Avenue Facility. This US Ink facility was purchased by the former Sun in or around 1937 from Fuchs and Lang. At the time of purchase, the facility operated as General Printing Ink ("GPI") and Sun maintained that designation. On December 31, 1986, SUN/DIC purchased the graphic arts materials business from former Sun, including the GPI facility, and the Sun Chemical name. The former Sun changed its name to Sequa Corporation. On December 15, 1993, the news ink manufacturing portion of the GPI Division of Sun, which including the 390 Central Avenue Facility, was combined with and began operating under US Ink Corporation, a wholly owned subsidiary of Sun. Since December 15, 1993, the facility has operated as a US Ink manufacturing facility. On January 1, 1997, US Ink Corporation was merged with Sun, and US Ink became one of Sun's unincorporated divisions.

397 Central Avenue Facility. This GPI facility is leased by Sun in a portion of a facility owned by Sequa and operates as the GPI pilot plant. GPI is an unincorporated division of Sun. From approximately the 1950s until 1986, former Sun operated the facility as a GPI pilot plant in the same space. On December 31, 1986, SUN/DIC purchased the graphic arts materials business from former Sun, at which time GPI became an unincorporated division of the new Sun.

5. Describe the Site at the time the Company took possession of it. If there was any business at the Site, explain the nature of that business.

Sun specifically objects to this question as overbroad and beyond the permissible scope of inquiry under Section 104(e) of CERCLA. Subject to and without waiving its objections, see response to question 4.

6. Describe in detail the nature of the relationship between the Company and the following entities: (1) U.S. Ink; (2) Sun Chemical Corporation. Indicate the time and manner in which the relationships were established. Specifically address the relationships as pertaining to any current or past operations or ownership at the Site.

Sun specifically objects to this question as overbroad and beyond the permissible scope of inquiry under Section 104(e) of CERCLA. Subject to and without waiving its objections, Sun responds that US Ink (formerly "United States Printing Ink") and General Printing Ink are unincorporated divisions of Sun. US Ink Corporation became a subsidiary of Sun on December 15, 1993, when Sun acquired Millmaster Onyx Group. In 1997, US Ink Corporation was merged with Sun, and US Ink became one of Sun's unincorporated divisions. GPI became a division of former Sun in 1937, when former Sun purchased Fuchs and Lang. When SUN/DIC purchased the graphic arts materials business, including GPI, from former Sun in December 1986, GPI became an unincorporated division of new Sun.

7. Describe in detail the nature of the activities conducted by the Company at the Site from the time the Company began operations at the Site until the present time, including:

(a) the services performed at the Site;

(b) all products which the Company manufactured, supplied, or sold which resulted from activities at the Site;

(c) research and development activities; and

(d) the time period during which those activities occurred.

Sun specifically objects to this question as overbroad and beyond the permissible scope of inquiry under Section 104(e). Subject to and without waiving its objections, Sun responds as follows:

390 Central Avenue Facility. From 1937, when former Sun purchased the facility from Fuchs and Lang, until 1979, a variety of inks and varnishes were made at the facility. In or around 1991, the facility began manufacturing black newsprint inks only.

397 Central Avenue Facility. As set forth above, since the 1950s, this facility has operated as a GPI pilot plant, developing polymers, coatings, and pigments. In the early 1980s, the pilot plant ceased developing pigments, and now the pilot plant currently develops polymers and coatings only. On December 31, 1986, SUN/DIC purchased the graphic arts materials business from former Sun.

8. Did your Company cease operations at the Site? If so, when? Describe the circumstances that precipitated your Company's decision to cease operations at the Site.

Sun specifically objects to this question as overbroad and beyond the permissible scope of inquiry under Section 104(e) of CERCLA. Subject to and without waiving its objections, Sun responds that it continues to operate the US Ink newspaper ink manufacturing facility at 390 Central Avenue and continues operate the small GPI pilot plant at 397 Central Avenue.

9. Did your company generate hazardous wastes at the Site, or does your company currently do so? Please describe your company's treatment, storage and/or disposal practices for any hazardous wastes generated at the Site.

Sun specifically objects to this question as overbroad and beyond the permissible scope of inquiry under Section 104(e) of CERCLA. Subject to and without waiving its objections, Sun responds as follows:

390 Central Avenue Facility. From time to time, this facility generated hazardous waste. Presently, it disposes of little if any hazardous waste. Since the 1980s, the facility has disposed of its hazardous waste off-site through licensed waste disposal firms.

397 Central Avenue Facility. This facility disposes hazardous waste off-site through licensed waste disposal firms on a 90-day or earlier schedule. Waste is stored indoors in 55-gallon DOT regulated drums. This facility has followed this procedure since the 1970s. Sun does not possess any information regarding the procedures followed in the 1950s and 1960s.

10. Provide a list of all local, state and federal environmental permits ever granted for the Site or any part thereof (e.g., RCRA permits, NPDES permits, etc.)

Sun specifically objects to this question to the extent it seeks information regarding each and every environmental permit that was every granted to the Facilities. Such a request is overly broad and unduly burdensome given the unlimited time frame for which information is sought. Subject to and without waiving its objections, Sun responds as follows:

390 Central Avenue Facility

Issuing Agency	**Permit Number**
NJDEP (Water connection permit)	0910
NJDEP (Storm Water Permit)	NJ0003841
NJDEP (Air)	PCP020001
NJDEP (Air)	PCP010003
NJDEP (Air)	PCP020002
NJDEP (Air)	PCP960001
NJDEP (Air)	PCP960002
NJDEP (Air)	PCP960003
NJDEP (Air)	PCP960004
NJDEP (Air)	PCP960005
NJDEP (Air)	PCP960006
NJDEP (Air)	PCP960007
NJDEP (Air)	PCP960008
NJDEP (Air)	PCP960009
NJDEP (Air)	PCP960010
NJDEP (Air)	PCP960011
NJDEP (Air)	PCP960012
NJDEP (Air)	PCP960013
NJDEP (Air)	PCP960014
NJDEP (Air)	PCP960015
NJDEP (Air)	PCP960016

NJDEP (Air)	PCP960017
NJDEP (Air)	PCP960018
NJDEP (Air)	PCP960019
NJDEP (Air)	PCP960020
NJDEP (Air)	PCP960021
NJDEP (Air)	PCP960022
NJDEP (Air)	PCP960023
NJDEP (Air)	PCP960024
NJDEP (Air)	PCP960025
NJDEP (Air)	PCP960026
NJDEP (Air)	PCP960027
NJDEP (Air)	PCP960028
USEPA	NJD002007151

397 Central Avenue Facility

Issuing Agency	**Permit Number**
NJDEP (Air)	921520 (Certificate No. 108471)
NJDEP (Air)	Certificate No. 074823
NJDEP (Air)	Certificate No. 108471
USEPA	NJD980650147

11. List all hazardous substances (as defined in the "Instructions"), which were, or are, used, stored, or handled at the Site.

Sun specifically objects to this question to the extent it seeks information regarding each and every hazardous substance that was or is currently used at the Facilities. Such a request is overly broad and unduly burdensome given the unlimited time frame for which information is sought. Subject to and without waiving its objections, see charts attached hereto as Exhibit A (390 Central Avenue Facility) and Exhibit B (397 Central Avenue Facility).

12. State when and where each substance identified in your response to Question 11 was, or is, used, stored, or handled at the Site and the volume of each substance.

Sun specifically objects to this question to the extent it seeks information regarding each and every hazardous substance that was or is currently used at the Facilities. Such a request is overly broad and unduly burdensome given the unlimited time frame for which information is sought. Sun further objects to this question to the extent it seeks information regarding past operations at a level of detail that is impossible to provide. For example, Sun cannot determine the identity and quantity of each and every hazardous substance used at the Facilities in years

past. Subject to and without waiving its objections, see charts attached hereto as Exhibit A (390 Central Avenue Facility) and Exhibit B (397 Central Avenue Facility).

13. Describe in detail how and where the hazardous wastes, industrial wastes, and hazardous substances generated, handled, treated, and stored at the Site were, or are, disposed of. If any hazardous wastes, hazardous substances, or industrial wastes were, or are, taken off-site for disposal or treatment, state the names and addresses of the transporters and the disposal facility used.

Sun specifically objects to this question to the extent it seeks information regarding the disposal method, transporters and disposal facility of all wastes generated at the Facilities. Such a request is overly broad and unduly burdensome given the unlimited time frame for which information is sought. Sun further objects to this question to the extent it seeks information regarding past operations at a level of detail that is impossible to provide. For example, Sun cannot determine the identity and quantity of each and every hazardous substance used at the Facilities in years past. Subject to and without waiving its objections, Sun responds that its waste from both Central Avenue Facilities is disposed by a licensed waste disposal firm.

The 390 Central Avenue Facility currently uses Auchter Industrial Vac Service to transport its hazardous waste and some of its non-hazardous waste to Clean Earth of North Jersey and Cali Carting of Kearney, New Jersey to transport its dumpster trash that contains some industrial waste to the Bergen County Utility Authority (BCUA) in North Arlington, New Jersey. BCUA then sends US Ink's dumpster trash to Keystone Landfill or Commonwealth Environmental Systems Landfill in Dunmore, Pennsylvania.

The following waste haulers have been used by the 390 Central Avenue Facility in the past (address provided if known):

Auchter Industrial Vac Service
Nappi Trucking Corp.
Dart Trucking
Horwith Trucks
Merola Enterprises
Safety Kleen Corp., 1200 Sylvan St., Linden, NJ 07036
B.F.S. [or B.E.S.] Specialist
Petro Chem.
Waste Conersion Inc.
Freehold Cartage Inc., P.O. Box 4629, Freehold, NJ 07728
Olsen & Hassold Inc.
S&W Waste (Clean Earth of North Jersey), 115 Jacobus Ave., South Kearny, NJ 07032
Continental Carriers
American Industrial Marine

A.B.C. Tank Co., 580 Clayton Ave., Clayton, NJ 08312
Remington
Waste Conversion, Inc.
Environmental Transfer Corp.
Conrail South Amboy Locomotive
Casie Ecology Oil Salvage, 3209 N. Mill Rd., Vineland, NJ 08360

Hazardous waste from the 390 Central Avenue Facility has been disposed of at the following facilities:

Safety Kleen Corp., 1200 Sylvan St., Linden, NJ 07036
Chem Clear Inc., Jeffery & Delaware Sts., Chester, PA 19013
Solvents Recovery Services, 1200 Sylvan St., Linden, NJ 07036
Petroleum Recyclers Inc., Cenco Blvd., Clayton, NJ 08312
S&W Waste (Clean Earth of North Jersey), 105 Jacobus Ave., South Kearny, NJ 07032
E.I. DuPont de Nemours Chambers Works, Rt. 130, Deepwater, NJ 08023
Lehigh Portland Cement Co., South Main St., Uniion Bridge, MD 21791
Ecolotec, 636 North Irwin St. Dayton, OH 45403
Industrial Fuels and Resources, 604 South Scott St., South Bend, IN 46624
American Landfill, 7926 Chapel St. S.E., Waynesburg, OH 44688
Lionetti Oil Recovery Inc., Runyon & CheeseQuake Rds, Old Bridge, NJ 08857
Advanced Environmental Technology Corp., 1 Eden Lane, Flanders, NJ 07836
Casie Ecology Oil Salvage, 3209 N. Mill Rd., Vineland, NJ 08360

The 397 Central Avenue Facility currently has its waste disposed of by D&G Environmental (P.O. Box 156, Oakland, NJ 07436), which uses MXI Maumee Express to haul the waste. The waste is disposed of at the following facilities: CycleChem (550 Industrial Dr., Lewisberry, PA 17339) and Southeastern Chemical & Solvent (755 Industrial Dr., P.O. Box 175, Sumter, SC 29151). The 397 Central Avenue Facility has used other waste haulers, i.e., AETC and Safety Kleen, in the past.

14. Who determined, or determines, where to treat, store, and/or dispose of the hazardous substances and/or hazardous wastes handled at the Site? Provide the names and current or last known addresses of any entities or individuals which made such determination.

Sun specifically objects to this question to the extent it seeks information regarding each and every person or entity that determined the location for treatment, storage and disposal of hazardous substances and hazardous wastes, as such a request is overly broad and unduly burdensome, especially given the unlimited time frame for which information is sought. Subject to and without waiving its objections, Sun responds that Joseph Patti (631 Central Avenue, Carlstadt, NJ 07072), the Carlstadt facilities manager, currently makes such determinations for

the 397 Central Avenue Facility. His predecessor, Richard Heaslip, made such determinations during his tenure.

At the 390 Central Avenue Facility, the following individuals make such determinations:

Gary Andrzejewski, Sun Chemical Corp., 135 West Lake St., Northlake, Illinois 60164

William Griffin, US Ink, A Division of Sun Chemical, 390 Central Ave., East Rutherford, New Jersey 07073

Thomas Donvito, US Ink, A Division of Sun Chemical, 651 Garden St., Carlstadt, New Jersey 07072

Gary Tiplitz, US Ink, 651 Garden St., Carlstadt, New Jersey 07072

15. Describe in detail the remedial activities conducted at the Site under CERCLA, the Resource Conservation and Recovery Act (RCRA), and/or laws of the State of New Jersey. Describe your Company's involvement in the remedial activities.

390 Central Avenue Facility. Sun undertook an ECRA remediation of this facility in the late 1980s. The remediation consisted of soil excavation (for the removal of petroleum hydrocarbons (PHCs) and PAHs), groundwater monitoring (for monitoring volatile organic compounds (VOCs) and PHCs) and the removal of five (5) underground storage tanks (USTs). One UST was abandoned in place in accordance with API guidelines. UST removals were completed in August 1988. (An above-ground diked tank farm was constructed over the UST area immediately after the excavations had been backfilled.) Post-excavation soil samples were collected as each phase of tank removal was completed. Soil sample results indicated that some PHC concentrations were above ECRA guidelines. These soils, however, were left in place in order to maintain the structural integrity of buildings, existing dike foundations, and an adjacent railroad siding. Sun received a No Further Action letter from the New Jersey Department of Environmental Protection on June 14, 1991.

397 Central Avenue Facility. Sun has no knowledge of any remedial activities conducted at this Site.

16. Identify all leaks, spills, or releases into the environment of any hazardous substances, pollutants, or contaminants that have occurred, or are occurring, at or from the Site. Specifically identify and address any leaks, spills, or releases to the Berry's Creek Study Area. Identify:

(a) when such releases occurred;

(b) how the releases occurred;

(c) the amount of each hazardous substances, pollutants, or contaminants so released (for substances contained in any sewage effluent from the Site, provide discharge monitoring reports or other data indicating discharge concentrations and loads, as available);

(d) where such releases occurred;

(e) where such releases entered the Berry's Creek Study Area, if applicable; and

(f) the pathway by which such releases entered the Berry's Creek Study Area, including any storm sewers, pipes, or other conveyances discharging to a water body or wetland; or via surface runoff, groundwater discharge, or any spills, leaks, or disposal activities.

Sun specifically objects to this question to the extent it seeks information regarding each and every leak, spill or release, as such a request is overly broad and unduly burdensome, especially given the unlimited time frame for which information is sought. Subject to and without waiving its objections, Sun responds as follows

390 Central Avenue Facility. Sun is aware of the following spills that occurred prior to Sun's satisfactory completion of its ECRA obligations:

In the summer of 1986, oil spilled during unloading operations from a tank railcar to a holding tank. The spill was cleaned up in September 1986. The cleanup involved an area of 10 feet by 25 feet along the rail siding west of the plant. Soil and crushed stone were removed from this area by Sun and disposed of as non-hazardous industrial waste. The volume removed was 250 square feet by one inch in depth. NJDEP was notified and on October 22, 1986, NJDEP gave verbal authorization to dispose of the material as non-hazardous industrial waste.

During the fall of 1986, a spill occurred in the truck loading area on the north side of the plant under the covered transfer terminal. Approximately 55 gallons of finished ink overflowed from a tanker during loading activities. The spilled ink was collected in the basin beneath the canopy and drained into the diked retention area. The spilled ink was drummed and transferred to the Ink Recovery Room for shipping to Solvent Recovery Service.

On February 7, 1990, twenty gallons of ink (petroleum distallate) spilled beneath a railcar which was used for storing ink. The ink was immediately removed and absorbent pads were placed on the ground where the ink was spilled. The railcar and rails were hand cleaned. The waste generated was placed in drums and capped and labeled. The waste was disposed of through a licensed waste hauler.

397 Central Avenue Facility. None known.

17. Please complete the form on page 5, below. Indicate on the form whether each of the chemicals listed has ever been released from the Site to the Berry's Creek Study Area, including creeks, ditches, or other water bodies, or wetlands. Follow all additional instructions on the form. In addition, please answer Question 16, above, specifically addressing any chemicals for which you answered "yes".

See Exhibit C (390 Central Avenue Facility) and Exhibit D (397 Central Avenue Facility).

18. Identify all companies, firms, facilities, and individuals (hereafter referred to as "customers") from whom your Company obtained, or obtains, materials containing Industrial Waste as defined in Number 6 of the Definitions and whose Industrial Waste was, or is, treated, stored, handled or disposed of at the Site. For each such customer:

(a) Describe the relationship (the nature of services rendered and products purchased or sold) between your Company and the customer;

(b) Provide Copies of any agreements or/and contracts between your Company and the customer;

(c) Provide the name and address of each customer who sent such materials, including contact person(s) within said customer;

(d) Provide shipping and transaction records pertaining to such Industrial Wastes sent by each customer, including but not limited to invoices, delivery receipts, receipt, acknowledging payment, ledgers reflecting receipt of payment, bills of lading, weight tickets, and purchase orders; and

(e) Provide the name and address of all companies and individuals who transported, or transport, Industrial Wastes to the Site.

Sun specifically objects to this question to the extent it presumes that Sun obtained Industrial Waste from any customers. Subject to and without waiving its objections, Sun responds that it never obtained materials containing Industrial Waste nor did it ever treat, store, handle or dispose of waste of "customers" at the 397 Central Avenue Facility. The 390 Central Avenue Facility in the past received returned ink from customers. The returned inks were recycled and/or disposed of through a licensed waste hauler. This practice ceased in or around 1993. The customers that are known to have returned ink are:

- *The Star Ledger, Newark, New Jersey (returned approximately 250-300 55-gallon drums per year;*

- *The Richmond Times, Alexandria, Virginia (returned approximately 200 55-gallon drums per year);*

- *The Syracuse Herald Journal, Syracuse, New York (approximately 170 55-gallon drums per year); and*

- *The New York Times, New York, New York (approximately 800 55-gallon drums per year).*

19. For each customers' Industrial Wastes handled, treated, stored, or disposed of at the Site, describe:

(i) the volume;

(ii) the nature;

(iii) chemical composition;

(iv) color;

(v) smell;

(vi) physical state (e.g., solid, liquid);

(vii) any other distinctive characteristics; and

(viii) the years during which each customer's materials were handled, treated, stored, or disposed of at the Site.

Sun specifically objects to this question to the extent it presumes that Sun obtained Industrial Waste from any customers. Subject to and without waiving its objections, see response to question 18 above.

20. Please supply any additional information or documents that may be relevant or useful to identify other companies or sources that sent industrial wastes to the Site.

Sun specifically objects to this question to the extent it presumes that Sun obtained Industrial Waste from any customers. Subject to and without waiving its objections, see response to question 18 above.

21. Please state the name, title and address of each individual who assisted or was consulted in the preparation of your response to this Request for Information and correlate each individual to the question on which he or she was consulted.

The following individual assisted with responses regarding the 390 Central Avenue Facility:

Thomas Donvito, Regulatory Manager, US Ink, 651 Garden St., Carlstadt, New Jersey 07072; consulted on all questions.

Leonard Pasculli, Senior Associate General Counsel, Sequa Corporation, 3 University Place, Hackensack, New Jersey 07601; consulted on questions 4 and 6.

Paul Nicastro, Regulatory Coordinator, US Ink, 651 Garden St., Carlstadt, New Jersey 07072; consulted on questions 2-7 and 9.

William Griffin, Plant Manager, US Ink, 390 Central Avenue, East Rutherford, New Jersey 07073; consulted on questions 2-7, 9, 11, 14 and 18.

George McEllone, Office Worker, 390 Central Avenue, East Rutherford, New Jersey 07073; consulted on questions 4 and 6.

The following individuals assisted with responses regarding the 397 Central Avenue Facility:

Richard Kmieck, Plant Manager, GPI/Sun Chemical Corporation, 397 Central Avenue, Carlstadt, New Jersey 07072; consulted on questions 3-5, 7, 9-21.

Joseph Patti, Facility Manager, GPI/Sun Chemical Corporation, 631 Central Avenue, Carlstadt, New Jersey 07072; consulted on questions 10 and 15.

22. For each question herein, identify all documents consulted, examined, or referred to in the preparation of the answer or that contain information responsive to the question and provide true and accurate copies of all such documents.

Sun compiled its response to this 104(e) request by reviewing numerous documents, including ISRA/ECRA submittals, waste manifests and hazardous waste generator reports, when available. The documents reviewed are too voluminous to produce herein. Sun produces certain summary pages of the ISRA/ECRA submittals for the 390 Central Avenue Facility. Documents produced herein are:

- *ECRA Site Evaluation Submission for the 390 Central Avenue Facility, dated February 27, 1987 (Exhibit E);*
- *Draft Report on Underground Storage Tank Removal Activities, dated October 14, 1988 (Exhibit F);*
- *Report on the Results of Cleanup Plan Implementation for the 390 Central Avenue Facility, dated September 26, 1990 (Exhibit G);*
- *Final ECRA Report for the 390 Central Avenue Facility, dated April 30, 1991, dated April 26, 1991 (Exhibit H); and*
- *No Further Action Letter, dated June 14, 1991 (Exhibit I).*

Other documents may be obtained upon request.

Very truly yours,

SUN CHEMICAL CORPORATION

F. Michael Zachara
Sr. Corporate Attorney

FMZ/wmz

cc: Clay Monroe, Esq. (w/enc.)

bcc: Leonard Pasculli, Esq. (w/enc.)
Mr. Thomas Donvito (w/enc.)
Mr. Richard Kmiec (w/enc.)
Ellen Radow Sadat, Esq. (w/enc.)
Ingrid D. Johnson, Esq. (w/enc.)

Hazardous Substances Used at 390 Central Avenue Facility

SUBSTANCE	WHEN ON HAND	WHERE USED & STORED	AVERAGE AMOUNT ON HAND (if known)
Chromium compounds	Prior to approx. 1987	Used in manufacturing inks; stored in the color room	Unknown
Lead compounds	Prior to approx. 1987	Used in manufacturing inks; stored in the color room	Unknown
Glycol ethers	Prior to 2000	Used in the manufacture of water-based inks; stored by the ball mill	Unknown
Mercury	Prior to approx. July 2000	Manometers	Less than 1 lb.
Mercury	Continually	Thermostats; lab thermometers	Unknown
Petroleum oils	Continually	Used throughout plant; stored in diked storage tanks and rail cars outside the plant	3,022,000 lbs. (approximate)
Copper compounds	Prior to 1992	Used in manufacturing inks; stored in the color room	Unknown

Note: Chemicals that may be present at trace levels in materials handled are not included.

Hazardous Substances Used at 397 Central Avenue Facility

ITEM	WHEN ON HAND	AMOUNT ON HAND
Acetic Acid	1976 - present	0-2 gallons
Acetone	1976 - present	0-1 drum
Adipic Acid	1976 - present	0-500 lbs.
Aluminum Sulfate	2002	0-10 lbs.
Ammonia	1976 - present	0-100 lbs.
Aniline	late 70's / early 80's	Unknown
Benzoic Acid	1976 - present	0-1000 lbs.
Biphenyl	1976 - present	0-1 drum
Butyl Acetate	1976 - present	0-1 drum
N-Butyl Alcohol	1976 - present	0-1 drum
Cyclohexane	1976 - present	0-1 drum
Cyclohexanone	1976 - present	0-1 drum
Dibutyl Phthalate	1976 - present	0-3 drums
Diethanolamine	1976 - present	0-1 drum
Diethylamine	1976 - present	0-1 drum
Diethyl Sulfate	mid 80's	0-5 gallons
Dimethyl Sulfate	mid 80's	0-5 gallons
Ethylene Diamine	1976 - present	0-1 drum
Ethylene Glycol	1976 - present	0-1 drum
Ethylene Glycol Monoethyl Ether	1976 - present	0-1 drum
Ethyl Acrylate	1976 - present	0-1 drum
Ethyl Methacrlate	1976 - present	0-1 drum
Formic Acid	1976 - present	0-2 gallons
Fumaric Acid	1976 - present	0-500 lbs.
Hydrochloric Acid	1976 - present	0-1 gallon
Hydroquinone	1976 - present	0-25 lbs.
Maleic Anhydride	1976 - present	0-500 lbs.
MDI	2001	0-150 lbs.
Mercury (in thermometers only)	Continuous	
Methanol	1976 - present	0-1 drum
Methylene Chloride	1976 - present	0-1 gallon
Methyl Ethyl Ketone	1976 - present	0-2 drums
Methyl Isobutyl Ketone	1976 - present	0-2 drums
Methylmethacrylate	1976 - present	0-1 drum
Paraformaldehyde	1976 - present	0-50 lbs.
Phosphoric Acid	1976 - present	0-2 drums
Phthalic Anhydride	1976 - present	0-500 lbs.
Potassium Hydroxide	1976 - present	0-100 lbs.
Propionic Acid	1976 - present	0-1 drum
Sodium Hydroxide	1976 - present	0-500 lbs.
Sodium Methylate	mid 80's	0-5 gallons
Sodium Phoshate, tribasic	2002	0-5 gallons
Styrene	1976 - present	0-1 drum
Sulfuric Acid	mid 80's	0-2 drums

Toluene	1976 - present	0-2 drums
Toluene Diisocyanate	1976 - present	0-1 drum
Toluidine – ortho	1976 - present	Unknown
Toluidine – para	1976 - present	Unknown
Triethylamine	1976 - present	0-5 gallons
Xylene	1976 - present	0-1 drum
Trichlroethane - 1,1,1-	1976 - present	0-1 gallon

Note: Chemicals that may be present at trace levels in materials handled are not included.

All the above-listed materials are (or were, if no longer used) stored indoors in one of the facility's contained storage rooms. The facility has several small storage rooms. All of the above (with the exception of mercury, which is used in thermometers and thermostats) are used in the development of polymers and coatings at this 2,000 square foot pilot facility.

Exhibit C

Request for Information Regarding Chemical Releases to the Berry's Creek Study Area

* * *

Instructions: As instructed in Question 17, please complete this form by marking the appropriate spaces. Indicate whether each of the chemicals listed has ever been released from the Site to the Berry's Creek Study Area, including creeks, ditches, or other water bodies, or wetlands. Follow additional instructions below. Return the completed form along with your other responses to the Request for Information in the Matter of the Berry's Creek Study Area, Bergen County, New Jersey. N/A signifies no information available.

	Yes	No	N/A
acenaphthene		x	
acenapthylene		x	
anthracene		x	
aluminum		x	
antimony		x	
arsenic		x	
benz(a)anthracene		x	
benzene		x	
benzo(a)pyrene		x	
benzo(b)fluoranthene		x	
benzo(g,h,i)perylene		x	
benzo(k)fluoranthene		x	
bis(2-ethylhexyl)phthalate		x	
butyl benzyl phthalate		x	
cadmium		x	
chlorinated dibenzo-p-dioxins (if "yes", please list specific dioxin compounds on a separate sheet)		x	
chlorinated dibenzofurans (if "yes", please list specific compounds on a separate sheet)		x	
chlorobenzene		x	
chloroform		x	
chromium		x	
chrysene		x	
copper		x	
cyanide		x	
dibenz(a,h)anthracene		x	
dichlorobenzene		x	
1,2-dichloroethene		x	
di-n-butyl phthalate		x	
1,2-dichlorobenzene		x	
di-n-butyl phthalate		x	
1,2-dichlorobenzene		x	
1,2-dichloroethane		x	
dieldrin		x	
di-n-octyl phthalate		x	
dieldrin		x	
di-n-octyl phthalate		x	
ethylbenzene		x	
fluoranthene		x	

	Yes	No	N/A
fluorene		x	
hexachlorobenzene		x	
indeno(1,2,3-cd)pyrene		x	
lead		x	
manganese		x	
mercury		x	
methylene chloride		x	
methyl ethyl ketone		x	
methyl mercury		x	
2-methylnaphthalene		x	
naphthalene		x	
nickel		x	
pentachlorophenol		x	
petroleum hydrocarbons		x	
phenanthrene		x	
phenol		x	
polychlorinated biphenyls (if "yes" please list specific congeners and aroclors on a separate sheet)		x	
polycyclic aromatic hydrocarbons (if "yes", please list specific compounds on a separate sheet if not listed on this page)		x	
pyrene		x	
selenium		x	
silver		x	
1,1,2,2-tetrachloroethane		x	
tetrachloroethylene		x	
thallium		x	
toluene		x	
1,2-trans dichloroethylene		x	
tetrachloroethylene		x	
thallium		x	
toluene		x	
1,2-trans dichloroethylene		x	
1,1,1-trichloroethane		x	
trichloroethylene		x	
vinyl chloride		x	
xylene		x	
zinc		x	

Thomas Donvito
Person completing form

US Ink, A Division of Sun Chemical.
Company

390 Central Ave., E. Rutherford, NJ
Site

PR\399279\7

Request for Information Regarding Chemical Releases to the Berry's Creek Study Area

* * *

Instructions: As instructed in Question 17, please complete this form by marking the appropriate spaces. Indicate whether each of the chemicals listed has ever been released from the Site to the Berry's Creek Study Area, including creeks, ditches, or other water bodies, or wetlands. Follow additional instructions below. Return the completed form along with your other responses to the Request for Information in the Matter of the Berry's Creek Study Area, Bergen County, New Jersey. N/A signifies no information available.

	Yes	No	N/A
acenaphthene		x	
acenaphthylene		x	
anthracene		x	
aluminum		x	
antimony		x	
arsenic		x	
benz(a)anthracene		x	
benzene		x	
benzo(a)pyrene		x	
benzo(b)fluoranthene		x	
benzo(g,h,i)perylene		x	
benzo(k)fluoranthene		x	
bis(2-ethylhexyl)phthalate		x	
butyl benzyl phthalate		x	
cadmium		x	
chlorinated dibenzo-p-dioxins (if "yes", please list specific dioxin compounds on a separate sheet)		x	
chlorinated dibenzofurans (if "yes", please list specific compounds on a separate sheet)		x	
chlorobenzene		x	
chloroform		x	
chromium		x	
chrysene		x	
copper		x	
cyanide		x	
dibenz(a,h)anthracene		x	
dichlorobenzene		x	
1,2-dichloroethene		x	
di-n-butyl phthalate		x	
1,2-dichlorobenzene		x	
di-n-butyl phthalate		x	
1,2-dichlorobenzene		x	
1,2-dichloroethane		x	
dieldrin		x	
di-n-octyl phthalate		x	
dieldrin		x	
di-n-octyl phthalate		x	
ethylbenzene		x	
fluoranthene		x	

	Yes	No	N/A
fluorene		x	
hexachlorobenzene		x	
indeno(1,2,3-cd)pyrene		x	
lead		x	
manganese		x	
mercury		x	
methylene chloride		x	
methyl ethyl ketone		x	
methyl mercury		x	
2-methylnaphthalene		x	
naphthalene		x	
nickel		x	
pentachlorophenol		x	
petroleum hydrocarbons		x	
phenanthrene		x	
phenol		x	
polychlorinated biphenyls (if "yes" please list specific congeners and aroclors on a separate sheet)		x	
polycyclic aromatic hydrocarbons (if "yes", please list specific compounds on a separate sheet if not listed on this page)		x	
pyrene		x	
selenium		x	
silver		x	
1,1,2,2-tetrachloroethane		x	
tetrachloroethylene		x	
thallium		x	
toluene		x	
1,2-trans dichloroethylene		x	
tetrachloroethylene		x	
thallium		x	
toluene		x	
1,2-trans dichloroethylene		x	
1,1,1-trichloroethane		x	
trichloroethylene		x	
vinyl chloride		x	
xylene		x	
zinc		x	

Richard Kmiec — **Person completing form**

Sun Chemical Corp. — **Company**

397 Central Ave. E. Rutherford, NJ — **Site**

PR\399279\7
PR 399279v8

Exhibit E

NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
HAZARDOUS SITE MITIGATION ADMINISTRATION
BUREAU OF INDUSTRIAL SITE EVALUATION

ENVIRONMENTAL CLEANUP RESPONSIBILITY ACT (ECRA)

APPLICATION FOR ECRA REVIEW
INITIAL NOTICE

SITE EVALUATION SUBMISSION (SES)

This is the second part of a two-part application submittal and must be submitted within 30 days following public release of the decision to close operations or execution of an agreement of sale or option to purchase.

DATE _____

NAME OF INDUSTRIAL ESTABLISHMENT SUN/DIC ACQUISITION CORPORATION

ADDRESS 390 Central Avenue

CITY OR TOWN East Rutherford Boro ZIP CODE 07073

MUNICIPALITY East Rutherford COUNTY Bergen

NAME OF PROPERTY OWNER SUN/DIC ACQUISITION CORPORATION

FIRM: SUN/DIC ACQUISITION CORPORATION

ADDRESS: 222 Bridge Plaza South, P. O. Box 1302

CITY OR TOWN: Fort Lee ZIP CODE: 07024

MUNICIPALITY Fort Lee COUNTY Bergen

SUBMIT THE ORIGINAL PLUS TWO COPIES OF THE FOLLOWING:

(NOTE: ITEM FOURTEEN (14) REQUIRES THREE COPIES)

9. A scaled site map identifying all areas where hazardous substances or wastes have been or currently are generated, manufactured, refined, transported, treated, stored, handled or disposed, above or below ground.
IS THIS MAP ENCLOSED? ☒ YES (See Appendix # I) ☐ NO

10. A detailed description of the most recent operations and processes at the industrial establishment organized in the form of a narrative report designed to guide the Department step-by-step through a plant evaluation, with particular emphasis on areas of the process stream where hazardous substances and wastes are generated, manufactured, refined, transported, treated, stored, handled or disposed on site, above or below ground. Also identify any floor drains with their points of discharge, septic systems if applicable, seepage pits and dry wells. Please note that establishments which ceased production prior to December 31, 1983, but are subject to ECRA because of on-going storage beyond that date, must provide details on past operations.

IS THIS REPORT ENCLOSED? ☒ YES (See Appendix # II) ☐ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

FOR DEP USE ONLY

Notice No. _____

1. A. A description of the types, age (installation date), construction material, capacity, contents, and locations of storage vessels, surface impoundments, landfills, or other types of storage facilities, including drum storage, containing hazardous substances or wastes.

ARE THESE FACILITIES IDENTIFIED ON YOUR SITE MAP OR DESCRIBED IN A NARRATIVE REPORT?
☒ YES (See Appendix # III) ☐ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

B. The integrity of all underground tanks which contain hazardous wastes or substances must be verified. This may be accomplished in one of several ways: a) Performance of a satisfactory leak test in conformance with Criterion 329 of the National Fire Protection Association, or; b) Performance of subsurface soil investigation (soil borings and analysis), or; c) Excavate and remove the tank and establish the absence of contamination, or; d) other methods approved by the NJDEP.

ARE THE RESULTS OF THE LEAK DETECTION TEST OR THE SUBSURFACE INVESTIGATION ENCLOSED?
☐ YES (See Appendix # _____) ☒ NO

IF YOU HAVE CHECK "NO", STATE THE REASON(S): See Sampling and Analysis Plan, Appendix VII, Section III.

2. A complete inventory of hazardous substances and wastes, including description and locations of all hazardous substances or wastes generated, manufactured, refined, transported, treated, stored, handled or disposed on site, above and below ground, and a description of the location, types and quantities of hazardous substances and wastes that will remain on site. (Attach additional sheets if necessary.) Review N.J.A.C. 7:1E, Appendix A and N.J.A.C. 7:26-8 prior to completing to ensure that all defined hazardous materials are included.

MATERIAL	QUANTITY	LOCATION	STORAGE METHOD	TO REMAIN ON SITE (Yes or No)
SEE APPENDIX IV for Total Material Inventory.				

A. A detailed description, date and location on a scaled map of any known spill or discharge of hazardous substances or wastes that occurred during the historical operation of the site and a detailed description of any remedial actions undertaken to handle any spill or discharge of hazardous substances or wastes. (Attach additional sheets if necessary.)

IS THIS INFORMATION ENCLOSED? ☒ YES (See Appendix # V) ☐ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

ARE THE SPILLS IDENTIFIED ABOVE INDICATED ON THE SCALED SITE MAP? ☐ YES ☒ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): Referenced by area description.

B. If this facility has an approved Spill Prevention Control and Countermeasure Plan (SPCC), enclose a copy with this submittal.

IS YOUR SPCC PLAN ENCLOSED? ☒ YES (See Appendix # VI)
☐ NO, this facility is not required to have an SPCC plan

A. A detailed sampling or other environmental evaluation measurement plan which includes proposed soil, groundwater, surface water, surface water sediment, and air sampling determined appropriate for the site. (This sampling plan must be developed in conformance with ECRA Regulations N.J.A.C. 7:1-3.14 et seq., and Quality Assurance Guidelines as developed by DEP)

ARE THREE COPIES OF THE SAMPLING PLAN ENCLOSED? ☒ YES (See Appendix = VII)
☐ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

B. If the sampling plan includes groundwater sampling and/or the installation of monitoring wells, the applicant must complete a "Request for Hydrogeologic Assessment" form (blank form attached).

IS GROUNDWATER SAMPLING PROPOSED? ☒ YES ☐ NO

IS THE "REQUEST FOR HYDROGEOLOGIC ASSESSMENT" FORM ATTACHED? ☒ YES (See Appendix = VIII)
☐ NO

APPENDIX II

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

15. A detailed description of the procedures to be used to decontaminate and/or decommission equipment and buildings involved with the generation, manufacture, refining, transportation, treatment, storage, handling, or disposal of hazardous wastes or substances including the name and location of the transporter, the ultimate disposal facility, and any other organizations involved.

IS THE DETAILED DESCRIPTION ENCLOSED? ☒ YES (See Appendix # IX) ☐ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

16. Copies of all previous soil, groundwater and surface water sampling results, including effluent quality monitoring, conducted at the site of the industrial establishment during the history of ownership/operation by the owner or operator. Also include a detailed description of the location, collection, chain of custody, methodology, analyses, laboratory, quality assurance/quality control procedures, and other factors involved in preparation of the sampling results.

ARE HISTORICAL RESULTS ENCLOSED? ☒ YES (See Appendix # X) ☐ NO

IF YOU HAVE CHECKED "NO", STATE THE REASON(S): _____

17. List any other information you are submitting or which has been formally requested by this agency:

I hereby certify that the information furnished on this application and any attachments is true. I am aware that false swearing is a crime in this State. I am cognizant that providing false information is a violation under ECRA and that I may be personally liable for penalties up to $25,000 per day.

2/27/87
Date

Signature

William H. Saltman
Name (Print or Type)

Vice President
Title

SUN/DIC ACQUISITION CORPORATION

SITE EVALUATION SUBMISSION

EAST RUTHERFORD, N.J.

TABLE OF CONTENTS

APPENDICES

SUN/DIC ACQUISITION CORPORATION
East Rutherford, New Jersey

ECRA SITE EVALUATION SUBMISSION

Item No. 10

APPENDIX NO. II

Detailed Process Description and Waste Streams
and
Non-Hazardous Waste Classification Documentation

1226B.SES 2.19.87

ITEM 10 - PROCESS DESCRIPTIONS AND WASTE STREAMS

The General Printing Ink Division of Sun/DIC Acquisition Corporation located at 390 Central Ave., East Rutherford, N.J. produces letter press news ink, web offset ink, and comic newsprint ink. The plant also contains an ink recovery process. Process areas are shown on Figure 1, Appendix I.

The principal components used in manufacturing ink and their storage locations are:

1. Carbon Black (rail car);
2. Ink Oil (T-10A, 3, 4, 300, 301, T-8, T102 and T-9);
3. Linseed Oil (Tanks No. T-1 and T-2);
4. Coblax (Tank No. T202);
5. Organic Pigments (bags and drums).

Additives which are used in the ink formulation process and their storage locations are:

1. Ethylene glycol (drum storage area between premix and ball mill areas);
2. Lecithin (drum, same area);
3. Aquapel (drum, same area);
4. Petrolatum (drum, same area);
5. Tall Oil Fatty Acid (drum, same area).

LETTER PRESS NEWS INK PROCESS

In this process, Carbon Black is mixed with Ink Oil in the Premix Area shown on Figure 1. The carbon black is pumped directly from a rail car and the ink oil is supplied from tank T-10A. 5000 to 7000 pound batches are mixed at one time in Tank T-306. The mixture is then pumped to the Ball Mill Area as a concentrated ink paste (semi-finished). After grinding in the ball mills, the paste is then pumped through magnetic filters located adjacent to the ball mills and then into two tanks (T-205, T-205A) located outside the plant in the truck loading area. The paste is then pumped through the Bowser Process Area where it is mixed with Ink Oil 750 from T-10A and processed to Finished Letter Press Ink or News Ink. The finished news ink is then stored in tank T-204 until loaded into tanker trucks or rail cars for delivery.

WEB OFFSET INK PROCESS

This process involves Carbon Black, Ink Oil, Nevchem Varnish and/or other additives mixed together in the Premix Area (tanks T-106 and T-206). The mixture is then pumped from Premix to Holding Tanks (108 and 109) in the Shot Mill Area. From the holding tanks, the mixture is processed through the Shot Mill. Shot mills contain BB-sized metal spheres through which the mix is ground under a positive pressure. From the shot mills, the ink is transferred to Let-Down Tanks (110-113) where the viscosity of the ink is adjusted by adding oil. The finished Web Offset Ink is then either stored in tanks T-112 through T-115 or drummed for shipping and stored on the south floor of the building. Both the holding tanks and let-down tanks are located adjacent to the shot mills.

COMIC NEWSPRINT INK BLENDING PROCESS

Two red pigments, one blue, and one yellow pigment are received from other plants for use in colored ink blending in the R.O.P. Area located in the northwest corner of the building. Flush (colored pigment) is mixed with Ink Oil in two 750-gallon mixing vats. Different flushes are blended in the vats to achieve the desired color. The ink is then pumped to transfer tanks (T-41,T-42,T-43,T-70,T-71,T-72) for storage until its drummed for shipping. Flush is stored in drums on the northeast side of the premix area and in the Bowser Area. Ink Oil is supplied from tanks 3, 4, 300, 301.

INK RECOVERY

An Ink Recovery System was constructed in 1984 in an attempt to recover used inks. Process equipment for this recovery system is still located in the room designated as Former Ink Recovery Area shown on Figure 2. Ink recovery was attempted intermittently on a trial basis during 1986. The process is no longer in operation and the area is presently being used to receive drummed quantities of returned ink from customers plus storage of inhouse-generated waste inks. All waste inks are transferee to and stored in holding tanks 5 and 6 in the Former Ink Recovery Area. These tanks are periodically emptied and the used inks are removed from site by Solvent Recovery Service (see below).

WASTE STREAMS

Any product or ingredient waste which can be collected as a liquid is stored in holding tanks in the Former Ink Recovery Area for disposal. Waste generated in volumes too small for recovery are wiped up with rags and disposed of as a dry waste. Dry

wastes are collected in the dumpster located in the area south of the ball mills and in a dumpster located outside on the north side of the plant. Dry solid bulk wastes such as pails, pallets, rags, cardboard, etc. are disposed of by Haulaway, Incorporated, Hoboken, New Jersey.

Waste inks are disposed of as a manifested non-hazardous waste in compliance with NJ DEP Hazardous Waste Regulations under the U.S. EPA Generators I.D. No. NJD002007151. Documentation relating to the non-hazardous classification of this waste is included in Appendix II.

The Treatment, Storage and Disposal Facility is Solvent Recovery Service (EPA I.D. No. NJD002182897) and the transporter is Continental Carriers (EPA I.D. NO. NJD990720658). The waste is typed as K086 (Ink Waste).

1226B.SES 2.19.87

SOLVENTS RECOVERY SERVICE
GULF COAST, INC.
1200 SYLVAN STREET : LINDEN, N. J. 07036
PHONE: (201) 862-2000

May 22, 1984

Mr. Gary M. Andrzejewski
GPI Division Manager
Safety, Health & Environmental
Control
Sun Chemical Corporation
135 West Lake Street
Northlake, Illinois 60164

Dear Gary:

Attached is a copy of my letter to David Schrier, N.J. DEP describing our understanding. I am also attaching a copy of the New Jersey regulations at N.J.A.C. 7:26-8.5 Hazardous Waste Determination - Generator Responsibilities.

Please give me a call if you have any questions or comments.

Very truly yours,

James R. Hulm

James R. Hulm
Vice President
jrh:k
attch.

SOLVENTS RECOVERY SERVICE
OF NEW JERSEY, INC.

1200 SYLVAN STREET : LINDEN, N. J. 07036

PHONE: (201) 862-2000

May 22, 1984

Mr. David Schrier
N.J. D.E.P.
Bureau of Hazardous Waste
32 E.Hanover Street
Trenton, New Jersey
08625

Dear Dave:

Attached is an analysis of ink sludge for General Printing Ink Division of the Sun Chemical Corporation on material that we processed for them in the past and will continue to process in the future. Based on the analysis, they made the determination this material is not classified as a hazardous waste and they will be shipping it to us without a manifest.

The properties of the material is such that we believe it is a more responsibly disposed of as a component of our industrial furnace fuel blend rather then as material to be dumped in a ID 27 landfill. We will continue to treat it in this way and do our normal testing on the material.

The test routinely carried out on material for fuel blending as reported in our Part B Application include a measurement of heat content chlorine analysis in water. These are the tests we will be performing on the Sun Chemical material. Any significant deviation in properties that we measure will, of course, be to further evaluation. However, we do not anticipate this need.

Very truly yours,

James R. Hulm
jrh:k
Attch.
cc: G. Andrejewski
Manifest File
U. F. Marini

Uly,
On Linda'a first visit to the plant after we have received a shipment of drums from General Printing, have her make a specific inspection of them with this letter in hand and note the condition of the drums and the fact that she has inspected them on her inspection report.

TE[redacted]LAB[redacted]TOR[redacted]DIV[redacted]OF[redacted]IN[redacted]
5220 East Ave. - Countryside, Il. 60525
(312) 482-7200

REPORT TO:
Chemical Service Corporation
4601 W. 138th St.
Crestwood, Il. 60445
cc
Attn: James Kuipers

Date: 11/14/83
Recd: 11/3/83
WO #: 16-1040

Laboratory Smp ID No.:	5388-3					
DESCRIPTION: ——> (Unless otherwise noted; results in parts per million - ppm) PARAMETERS: ↓	CSC No. thick dark blue paint-type sludge Physical Description: Newark Star Ledger, Newark, N.J. news ink			PARAMETERS:		maximum concentrations: (metals only)
	AS RECEIVED	TOTAL	REACTIVE		TOTAL	E.P.TOXICITY	
FLASHPOINT - (140° F *)	>200°F			SILVER		<0.002	5.0 ppm
Percent Acidity	n/a %			ARSENIC		<0.014	5.0 ppm
Percent Alkalinity	n/a %			BARIUM		1.325	100.0 ppm
pH (2-12.5 * *)	7.0			CADMIUM		0.005	1.0 ppm
Percent Total Solids	74.9 %			CHROMIUM ***		<0.005	5.0 ppm
SULFIDE	27.8			MERCURY		<0.0005	.2 ppm
CYANIDE	1.672			LEAD		<0.001	5.0 ppm
PHENOL	58.12			SELENIUM		<0.02	1.0 ppm
Percent Ash	9.3 %			COPPER		0.071	
Specific Gravity	solid			NICKEL		0.017	
Percent Moisture	solid %			ZINC		0.096	
BTU/LB.	14034						
Percent Sulphur	<0.5 %			NON-HAZARDOUS			
Percent Chlorine	<0.5 %						
Sodium	5.43						
				*** total			

* Maximum -- ** Allowable Range
pH analyses done on a 10% solution

Certified by: [signature]

1 - 800 - 428-3511

REPORT TO:
James Kuipers
Chemical Service Corporation
4601 W. 138th St.
Crestwood, Il. 60445

Date: 3/28/84
Recd: 3/22/84
WO #: 16-0310

Laboratory Smp ID No.:	1955-4
DESCRIPTION: → (ss otherwise noted: ts in parts per on - ppm) PARAMETERS: ↓	Newark Star Ledger
ctive Cyanide	0.290
active Sulfide	20.0

Certified by: Carl L. Anders

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WASTE MANAGEMENT
32 E. Hanover St., CN 028, Trenton, N.J. 08625

DR. MARWAN M. SADAT, P.E.
DIRECTOR

LINO F. PEREIRA, P.E.
DEPUTY DIRECTOR

April 16, 1984

Mr. Gary Andrzejewski
GPI Division Manager
Safety, Health & Environmental Control
Sun Chemical Corporation
135 West Lake Street
Northlake, Illinois 60164

Dear Mr. Andrzejewski:

In response to your letter of April 2, 1984 for a Departmental opinion on the classification of News Ink Sludge, please be advised that wastes which conform with the representative sample that provided the basis for data submitted to the Department are classified as industrial waste (I.D.#27) pursuant to the rules of the Division of Waste Management. Wastes conforming with the characteristics of the representative samples must be disposed at facilities authorized to accept industrial waste (I.D.#27).

Be further advised that this letter constitutes merely an advisory opinion on the applicability of current New Jersey waste classification standards to a specific representative sample of a waste stream. It expresses no opinion regarding any particular waste shipment to the extent that its characteristics and content differ from the representative sample of a waste stream.

Moreover, because the Department has not examined, inspected or analyzed the wastes you propose to dispose, as represented in your letter of April 2, 1984, this response does not constitute any representation as to the actual chemical composition of said material.

Accordingly, prior to disposal of this waste, you may wish to contact the selected disposal facility to establish an analytical protocol which will satisfy all concerned parties that current regulations allow for such disposal.

Should you have any further questions regarding this matter, please contact Mr. David Schrier of my staff at (609) 292-8341.

Very truly yours,

Shirlee Schiffman

Shirlee Schiffman
Assistant Chief
Bureau of Hazardous Waste
Classification and Manifest

PR14:jl
c: Mr. Ron Corcory
Mr. Edward Londres

SUN/DIC ACQUISITION CORPORATION
East Rutherford, New Jersey

ECRA SITE EVALUATION SUBMISSION

Item 13A

APPENDIX NO. V

Description of Spills

ITEM 13. Description of Spills

Two spills have occurred and were cleaned up at the site.

1. The first involved ink oil spilled during unloading operations from a tank railcar to a holding tank. This spill occurred during the summer of 1986 and was cleaned up during September, 1986. The cleanup involved an area 10'x25'along the rail siding west of the plant in the vicinity of Tanks T-8 and T-9 (see Figure 2). Soil and crushed stone was removed from this area by Sun Chemical and disposed of as an ID-27 waste. The volume removed was of the area described above (250 ft. sq.) by 1 inch in depth. This volume involved not only the actual spill but also stains that had occurred over the years due to small leaks involved in material handling.

   The N.J. Department of Environmental Protection was notified and on 10/22/86 gave verbal authorization to dispose of the material as an I.D. 27 (see letter to Mr. Kurt Whitford, NJ DEP). No other documentation is available concerning disposal.

2. The second spill occurred during Fall, 1986, in the truck loading area on the north side of the plant under the covered transfer terminal. The two catch basins located in this area are connected by a drain pipe which empties into the diked retention area under Tank T-204. Approximately 55 gallons of finished ink was overflowed from a tanker during loading activities. This product was collected in the basin beneath the canopy and drained into the diked retention area. Approximately 55 gallons of product was drummed and transferred to the Ink Recovery Room for shipping to Solvent Recovery Service.

Sun Chemical Corporation
News Ink Division
General Printing Ink

390 Central Avenue
East Rutherford,
New Jersey 07073
(201) 935-8666

September 16,1986

N.J.Department Of Environmental Protection
32 East Honover Street
Trenton,N.J. 08625
Attn; Mr. Kurt Whitford
Re; Soil Analysis
I.D. Number

Dear Mr. Whitford,

Reference our conversation of September 11,1986, pertaining to an identification number for disposal of soiled dirt and crushed stone, I have listed below the information you requested, along with a copy of the laboratory analysis.

1. Material spilled is a virgin mineral oil.
2. Area to clean is approximately 10'x25'. The soil and stone is approximately one inch in depth.
3. The area soiled was from hose connections dripping as the oil is pumped from the tank truck into a storage tank.

Mr. Whitford if you need additional information please contact me at the following number - 201-438-4041.
Thanking you in advance for your cooperation in this matter,
I remain,

KURT WHITFORD GAVE ME A VERBAL OIL 10/24/86!
ID-27
1-609-292-5341

Very Truly Yours
Peter J. Vincelli
Peter J.Vincelli
Plant Manager

PJV/ms

Info cc; V.J.Lewis G.Andrezejewski

INTERNATIONAL TECHNOLOGY CORPORATION

August 25, 1986

Mr. Pete Vincelli
Sun Chemical Company
390 Central Avenue
East Rutherford, NJ 07073

Dear Mr. Vincelli:

Analysis of the soil sample collected July 7, 1986 has been completed. The results are presented in the attached table.

The determinations were performed in accordance with EPA/NJDEP Approved Methodology.

An invoice is enclosed for the analysis. If you have any questions, please feel free to contact me.

Very truly yours,

INTERNATIONAL TECHNOLOGY CORPORATION

Thomas Grenci
Laboratory Manager

TG:mg
Enclosure
#5498/0955

INTERNATIONAL TECHNOLOGY CORPORATION

Sun Chemical Company
390 Central Avenue
East Rutherford, NJ 07073
To Attn. of: Mr. Vincelli
N.J. Lab Certification ID#12064

Job #: 5498
Date: 8/25/86
Auth:GPI-150065
Lot #: 0955
Invoice #: NA14208
Sample Date: 7/7/86

	#57999 Oil Stained Soil Area (mg/kg-dry wt.)	E.P. Toxicity Leachate (mg/L)	EPA Maximum Leachate Concentration (mg/L)
Cyanide	1.1	-	-
Sulfide	<4	-	-
Petroleum Hydrocarbons	1800	-	-
% Solids	92	-	-
Arsenic		<0.01	5.0
Barium		0.3	100.0
Cadmium		0.013	1.0
Chromium		<0.01	5.0
Lead		0.02	5.0
Mercury		<0.0005	0.2
Selenium		<0.01	1.0
Silver		<0.01	5.0

Regional Office
165 Fieldcrest Avenue • CN 7809 • Edison, New Jersey 08818-7809 • (201) 225-2000

INTERNATIONAL TECHNOLOGY CORPORATION

Sun Chemical Company
390 Central Avenue
East Rutherford, NJ 07073
To Attn. of: Mr. Vincelli
N.J. Lab Certification ID#12064

Job #: 5498
Date: 8/25/86
Auth:GPI-150065
Lot #: 0955
Invoice #: NA14208
Sample Date: 7/7/86

PCB Compounds (by GC)	#57999 Oil Stained Soil Area (ppm)
PCB-1016	ND
PCB-1221	ND
PCB-1232	ND
PCB-1242	ND
PCB-1248	ND
PCB-1254	ND
PCB-1260	ND

ND - NONDETECTABLE LESS THAN 1 ppm

SUN/DIC ACQUISITION CORPORATION
East Rutherford, New Jersey

ECRA SITE EVALUATION SUBMISSION

Item No. 13B

APPENDIX VI

SPCC Plan

1226B.SES 2.19.87

(Prior to completing Part I, refer to regulations and instructions page 5.)

SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN

PART I
GENERAL INFORMATION

1. Name of facility Sun Chemical Corporation - General Printing Ink Division

2. Type of facility Production of Printing Inks

3. Location of facility 390 Central Avenue
East Rutherford
New Jersey 07073

4. Name and address of owner or operator:

Name Sun Chemical Corporation

Address 222 Bridge Plaza South
Ft.Lee, New Jersey 07024

5. Designated person accountable for oil spill prevention at facility:

Name and title William Griffin - Plant Manager

6. Facility experienced a reportable oil spill event during the twelve months prior to Jan. 10, 1974 (effective date of 40 CFR, Part 112). (If YES, complete Attachment #1.) _____

MANAGEMENT APPROVAL

This SPCC Plan will be implemented as herein described.

Signature Gary M Andrzejewski

Name William Griffin or Gary M. Andrzejewski

Title Plant Manager / GPI Division Manager Safety, Health & Environmental Control

CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Ruyintan E.Mehta
Printed Name of Registered Professional Engineer

(Seal)

Ruyintan E Mehta
Signature of Registered Professional Engineer

Date February 19 1987

Registration No. GE 27545 State N.J.

 EPA ID NUMBER:

NJD0020071517

7. Potential Spills — Prediction & Control:

Source	Major Type of Failure	Total Quantity (gals)	Rate (gals/hr)	Direction of Flow*	Secondary Containment
TANKS (ABOVE GROUND)					
T-116 Finished News Ink	Outdoor Overflow or leak	24,000	240	Contained	Yes
-116A Ink Oil	" "	24,000	240	"	"
-112 Finished News Ink	" "	20,000	200	"	"
-113 " "	" "	20,000	200	"	"
-114 " "	" "	20,000	200	"	"
-115 " "	" "	20,000	200	"	"
-101 Ink Oil	" "	20,000	200	"	"
-102 Varnish	" "	20,000	200	"	"
-202 Coblax	" "	15,000	150	"	"
-3 Mineral Oil	" "	1,496	15	"	"
-4 " "		1,496	15		
-391 Ink Oil	" "	6,290	63	"	"
-300 " "	" "	6,290	63	"	"
-2 Linseed Oil	" "	2,917	29	"	"
-1 " "	" "	2,917	29	"	"
-205 Paste Ink	" "	20,242	202	"	"
-205A " "	" "	20,242	202	"	"
-205B Web Offset Ink	" "	20,080	201	"	"
-204 Finished Letterpress	" "	30,000	300	"	"
-21 Process Tank	" "	500	5	"	"
Tank Wagon	" "	8,000	80	North-East	(Yes(See Discussion)
Rail Car	" "	23,000	230	East	(Yes(See Discussion)

*SITE PLAN SHOWING TANK LOCATIONS ENCLOSED (DWG. #A-52312, REV.A)

Discussion:

Tank wagon and rail car loading and unloading is supervised by the operator and checked by the shift supervisor. Slopes and drainage pattern allows blocking of culverts with sandbags to prevent flow of spill away from site and containment for immediate clean-up.

All of the above tanks are diked.

*Attach map if appropriate.

Name of facility East Rutherford Printing Ink Plant

Operator Sun Chemical Corp., General Printing Ink Division

PART I
GENERAL INFORMATION

EPA ID NUMBER:
NJD020071517

[Response to statements should be: YES, NO, or NA (Not Applicable).]

8. Containment or diversionary structures or equipment to prevent oil from reaching navigable waters are practicable. (If NO, complete Attachment #2.) Yes

9. Inspections and Records
   A. The required inspections follow written procedures. Yes
   B. The written procedures and a record of inspections, signed by the appropriate supervisor or inspector, are attached. Yes
   Discussion: Visual inspection of the facilities and equipment are made each day, at least twice a shift in the normal course of duty by plant personnel. These regular routine observations cover all areas where the potential for a spill exists and are not recorded.

   Pumping of rainwater from the diked areas is pumped to the sewer system after observations are made that it is not contaminated. If found to be contaminated, it will be isolated in drums to be disposed off as regulated hazardous waste.

10. Personnel, Training, and Spill Prevention Procedures
   A. Personnel are properly instructed in the following:
   (1) operation and maintenance of equipment to prevent oil discharges, and Yes
   (2) applicable pollution control laws, rules, and regulations.
   Describe procedures employed for instruction: Written procedures have been reviewed with each employee and are also permanently posted in the plant.

   B. Scheduled prevention briefings for the operating personnel are conducted frequently enough to assure adequate understanding of the SPCC Plan. Yes
   Describe briefing program: Personnel handling the loading, unloading and transfer and storage of bulk liquids have regular meetings with their supervisor to review.

Name of facility East Rutherford Printing Ink Plant

Operator Sun Chemical Corp., General Printing Ink Division

(Prior to completing Part II, Alternate A, refer to regulations and instructions pages 6-7.)

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

EPA ID NUMBER: NJD0020071517

A. Facility Drainage

1. Drainage from diked storage areas is controlled as follows (include operating description of valves, pumps, ejectors, etc. *(Note: Flapper-type valves should not be used)*:

When drainage is necessary, a portable pump is moved to the diked area and installed. Upon completion, the pump is removed.

2. Drainage from undiked areas is controlled as follows (include description of ponds, lagoons, or catchment basins and methods of retaining and returning oil to facility):

Spills are contained by plugging of culverts with sand bags. Spilled material is then picked up with a vacuum truck (contracted) or by scraping with a plow, picking up, and given to a scavernger for disposal.

3. The procedure for supervising the drainage of rain water from secondary containment into a storm drain or an open watercourse is as follows (include description of (a) inspection for pollutants, and (b) method of valving security). (A record of inspection and drainage events is to be maintained on a form similar to Attachment #3):

A sample of rainwater is inspected visually. If oils are present, the Supervisor is notified and the material is transferred to containers for return to the plant, or for disposal by a scavenger

Valve security is maintained by the use of a portable pump which is not installed in the diked area.

Name of facility East Rutherford Printing Ink Ptant

Operator Sun Chemical Corp., General Printing Iek Division

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

EPA ID NUMBER:
NJD0020071517

[Response to statements should be: YES, NO, or NA (Not Applicable).]

B. Bulk Storage Tanks

1. Describe tank design, materials of construction, fail-safe engineering features, and if needed, corrosion protection:
Tanks are carbon steel, U.L. label. Underground tanks have a corrosion resistant coating. Liquid level gauges are installed on all tanks.

2. Describe secondary containment design, construction materials, and volume:
All above ground tanks are in diked areas. The diked walls are constructed of 8-inch concrete blocks with a minimum of 4-inch concrete bottoms. Some recent dikes are of 8-inch poured concrete sections. The interior sides and top of dike walls are sealed with 1/2-inch cement sand mixture bitumastic seal providing a watertight seal. Each dike is capable of containing 150% of the capacity of the largest tank within its walls. The bottom of each diked area is sloped toward a sump located within the diked walls.

3. Describe tank inspection methods, procedures, and record keeping:
Daily inspections by the workmen in the area. No records are maintained.

4. Internal heating coil leakage is controlled by one or more of the following control factors:
   (a) Monitoring the steam return or exhaust lines for oil. _____
   Describe monitoring procedure:
   (b) Passing the steam return or exhaust lines through a settling tank, skimmer, or other separation system. Yes
   (c) Installing external heating systems. _____

5. Disposal facilities for plant effluents discharged into navigable waters are observed frequently for indication of possible upsets which may cause an oil spill event. N/A
Describe method and frequency of observations:

Name of facility East Rutherford Printing Ink Plant

Operator Sun Chemical Corp., General Printing Ink Division

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

EPA ID NUMBER: NJD0020071517

[Response to statements should be: YES, NO, or NA (Not Applicable).]

C. Facility Transfer Operations, Pumping, and In-plant Process

1. Corrosion protection for buried pipelines:
   (a) Pipelines are wrapped and coated to reduce corrosion. N.A.
   (b) Cathodic protection is provided for pipelines if determined necessary by electrolytic testing. ____
   (c) When a pipeline section is exposed, it is examined and corrective action taken as necessary. ____

2. Pipeline terminal connections are capped or blank-flanged and marked if the pipeline is not in service or on standby service for extended periods. N.A.
   Describe criteria for determining when to cap or blank-flange: ____

3. Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction. N.A.
   Describe pipe support design: ____

4. Describe procedures for regularly examining all above-ground valves and pipelines (including flange joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces): ____

   Regular routine operations of employees bring them within proximity of all such items several times per day.

5. Describe procedures for warning vehicles entering the facility to avoid damaging above-ground piping: ____

   Piping is removed from traffic areas.

Name of facility East Rutherford Printing Ink Ptant

Operator Sun Chemical Corp., General Printing Ink Division

[Response to statements should be: YES, NO, or NA (Not Applicable).]

D. Facility Tank Car & Tank Truck Loading/Unloading Rack

Tank car and tank truck loading/unloading occurs at the facility. (If YES, complete 1 through 5 below.) Yes

1. Loading/unloading procedures meet the minimum requirements and regulations of the Department of Transportation. Yes

2. The unloading area has a quick drainage system. Yes

3. The containment system will hold the maximum capacity of any single compartment of a tank truck loaded/unloaded in the plant. Yes
   Describe containment system design, construction materials, and volume:

   The drains from the loading area are pitched and go to the diked containment area for tanks T-204, T205, T-205A and T-205B. The dike is capable of containing in excess of 45,000 gal. of liquid.

   Accidental spills from loading/unloading can be pumped out of the sump located within the dike for safe disposal.

4. An interlocked warning light, a physical barrier system, or warning signs are provided in loading/unloading areas to prevent vehicular departure before disconnect of transfer lines. Yes
   Describe methods, procedures, and/or equipment used to prevent premature vehicular departure:

5. Drains and outlets on tank trucks and tank cars are checked for leakage before loading/unloading or departure. Yes

Name of facility East Rutherford Printing Ink Plant

Operator Sun Chemical Corp., General Printing Ink Division

PART II, ALTERNATE A
DESIGN AND OPERATING INFORMATION
ONSHORE FACILITY (EXCLUDING PRODUCTION)

EPA ID NUMBER: NJD0020071517

[Response to statements should be: YES, NO, or NA (Not Applicable).]

E. Security

1. Plants handling, processing, or storing oil are fenced. Yes

2. Entrance gates are locked and/or guarded when the plant is unattended or not in production. Yes

3. Any valves which permit direct outward flow of a tank's contents are locked closed when in non-operating or standby status. No

4. Starter controls on all oil pumps in non-operating or standby status are:
   (a) locked in the off position; No
   (b) located at site accessible only to authorized personnel. Yes

5. Discussion of items 1 through 4 as appropriate:

(3) Valves are all within fenced areas.

6. Discussion of the lighting around the facility: Excellent within the fenced area.

Name of facility East Rutherford Printing Ink Plant

Operator Sun Chemical Corp., General Printing Ink Division

SPCC PLAN, ATTACHMENT #1
SPILL HISTORY

EPA ID NUMBER:
NJD0020071517

(Complete this form for any reportable spill(s) which has (have) occurred from this facility during the twelve months prior to January 10, 1974 into _____ navigable water.)

1. Date _____ Volume _____ Cause: _____

Corrective action taken: _____

Plans for preventing recurrence: _____

2. Date _____ Volume _____ Cause: _____

Corrective action taken: _____

Plans for preventing recurrence: _____

3. Date _____ Volume _____ Cause: _____

Corrective action taken: _____

Plans for preventing recurrence: _____

Name of facility East Rutherford Printing Ink Plant

Operator Sun Chemical Corp., General Printing Ink Division

SPCC PLAN, ATTACHMENT #2
OIL SPILL CONTINGENCY PLANS AND
WRITTEN COMMITMENT OF MANPOWER

EPA ID NUMBER:
NJD0020071517

Secondary containment or diversionary structures are impracticable for this facility for the following reasons (attach additional pages if necessary):

	Yes
A strong oil spill contingency plan is attached.	X
A written commitment of manpower is attached.	X

Name of facility East Rutherford Printing Ink Plant

Operator SunChemical Corp., General Printing Ink Division

SPCC PLAN, ATTACHMENT #3
ONSHORE FACILITY BULK STORAGE TANKS
DRAINAGE SYSTEM

EPA ID NUMBER:
NJD0020071517

Inspection Procedure:

Sample rainwater. If visual oil is present, notify supervisor. Sample will then be checked by laboratory personnel for pumping and disposal instructions.

Record of drainage, bypassing, inspection, and oil removal from secondary containment:

Date of Drainage	Date of Bypassing		Date of Inspection	Oil Removal	Supervisor's or Inspector's Signature
	Open	Closed			

Name of facility East Rutherford Printing Ink Plant

Operator Sun Chemical Corp., General Printing Ink Division

EPA ID NUMBER:

NJD0020071517

PROCEDURE FOR ALL EMPLOYEES IN CASE OF SPILL OUTSIDE OF PLANT BUILDINGS

In order to comply with Regulations of the Federal Government and to prevent possible pollution of the water system, each employee has the following responsibilities in the case of a spill. (Over-running tank, leaking pipes or pumps, failure of valve on a tank truck or rail car.)

1. Report the spill immediately to your Supervisor, or the Plant Manager.

2. Shut off all equipment to stop the flow of material.

3. Close off all drainage outlets to prevent the spill from leaving the plant and entering the waterway.

4. Assist in the immediate clean-up of materials which might cause pollution.

EPA ID NUMBER:
NJD0020071517

CLEAN-UP PROCEDURES
LIQUID SPILLS

Because liquid spillage is a frequent occurrence in our industry and since has impact on safe operating procedures from standpoints of housekeeping and personal hygiene, the followine guide is to be observed as standard branch policy.

I. DEFINITION OF LIQUID SPILLAGE:

Liquid spillage means any visible amount of any type of liquid (or any vehicle used to carry a pigment) that leaks, drips, or is dropped on the floor or other foreign surface. It may originate from a tank, a header, a drum or a tool, etc.

II. SPILL CLASSIFICATIONS:

A. Small - are those pools or blobs that can be measured in ounces and never exceed several pounds.

B. Large - are those from small drum size to 55 gal. drum size that spread over sizable surfaces. While these occur only occasionally, they usually interrupt production in the immediate area rather drastically.

C. Major - are those of small or large tank or container size. These seldom happen but when they do, they lead to the involvement of management personnel.

III. RESPONSIBILITY FOR CLEAN-UP

This responsibility rests with the last employee involved with the handling of the vehicle before spillage, and his supervisor, for A & B spills. On a C spill, responsibility belongs with the supervisor and any number of employees of the clean-up crew.

IV. CLEAN-UP PROCEDURES

A. These small spills or drippages are to be cleaned up immediately by the employee that caused the respective blight, using a scraping tool and using a rag wetted with an acceptable solvent.

B. Large spills require more extensive attention. The supervisor must observe and properly supervise the execution of the following steps:

1. Designate whatever personnel necessary to complete the clean-up job as soon as possible.

2. Provide whatever tools that are necessary, including waste receptacles. Floors (or surfaces) must be shoveled or scraped free of material before mopping is started.

NOTE: It will be necessary to restrict traffic from the clean-up area until completion of the cleaning.

SPILL PREVENTION PLAN

EPA ID NUMBER:

NJD0020071517

REPORTING PROCEDURE

A. Telephone Ndmbers to call -

ALL PLANTS MUST CALL:

National Response Center

(800) 424-8802

This satisfies the requirement for notifying Federal EPA and the Coast Guard.

EACH PLANT MUST THEN CALL ONE OF THE FOLLOWING NUMBERS TO NOTIFY STATE EPA.

NJ EPA NO. (609) 292-9877

Please include a written statement in your files indicating when the call(s) were made, the person(s) spoken to, time of the call, and summary of the conversation.

A complete report must be filed with the New Jersey EPA at the following address:

State of New Jersey
Department of Environmental Protection
Division of Water Protection
CN 028
Trenton, N.J. 08625

The following is to be reported:

1. Where spill is located.
2. Quantity of spill which has entered or about to enter a navigable waterway.
3. Clean-up and containment measures taken.
4. Measures to prevent recurrence of spill.
5. Injuries to human beings.
6 Assessment of potential damage to human beings and environment.

A. EMERGENCY ACTION PLAN (GENERAL)

RE: SPILL/STORAGE TANK RUPTURE STANDARD OPERATING PROCEDURES

- After the emergency has passed, the Plant Manager will hold an investigation into the cause. He will report with the Operations Manager within 72 hours of the incident.

- This procedure applies to all chemical and oil spills, line failures, and/or tank ruptures.

SPILL PREVENTION PLAN - (Continued)

MISCELLANEOUS DRUM

Caution: Consult Material Safety Data sheets maintained in Production Manager's office for specific hazards of each material.

Dry Powders (other than DCB) - Shovel up spills, Dilute with water and divert to effluent neutralization system.

Liquids (oils) - (1) Absorb spill with some absorbent medium. Typical mediums are: hazorb, absorball or sorbent (3M).

(2) Shovel up spill and absorbent medium into drum marked HAZARDOUS WASTE with exact contents of spill noted.

(3) Transfer drum to hazardous waste storage area.

(4) Discard as hazardous waste to approved sites.

Fuel Oil - (1) Spill of less than 1,000 U.S.Gallons.

(a) Handles as for liquid oil spills

(b) Does not have to be reported.

(2) Spill of greater than 1,000 U.S.Gallons of oil.

Whenever a facility has discharged more than 1,000 U.S. Gallons of oil into or upon the navigable waters of the U.S. or adjoining shorelines in a single spill event or violates applicable water quality standards or causes a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines, the owner or operator of such facility shall call the U.S. EPA REGIONAL ADMINISTRATOR, STATE WATER POLLUTION CONTROL AGENCY and if the oil enters a navigable waterway, the owner must also notify the LOCAL COAST GUARD OFFICE.

if a reportable spill occures twice within any twelve month period, the owner or operator must submit to the REGIONAL ADMINISTRATOR within 60 DAYS of the second reportable spill the following information: (a duplicate must also be sent to the STATE WATER POLLUTION CONTROL AGENCY):

1. Name of the facility.
2. Name(s) of the owner or operator of the facility.
3. Location of the facility.
4. Date and year of initial facility operation.
5. Maximum storage or handling capacity of the facility and normal daily throughput.

6. Description of the facility, including maps, flow diagrams, and topographical maps.

7. A complete copy of the Spill Prevention Control and Countermeasure Plan (SPCC) with any Amendments.

8. The cause(s) of such spill, including a failure analysis system or subsystem in which the failure occurred.

9. The corrective action and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements.

10. Additional prevention measures taken or contemplated to minimize rhe possibility of recurrence.

11. Such other information, as the Regional Administrator may reasonably require,pertinent to the SPCC Plan or spill event.

SUMMARY

The discharge oil MUST enter into or upon a navigable waterway and it must be spilled in excess of 1,000 gallons or it must cause a film or sheen of the surface of the waterway before the U.S. EPA, State Agency, or Coast Guard is called.

If the oil is spilled on plant property, regardless of amount, and it does not enter a navigable waterway or water supply, then it does not have to be reported.

EPA ID NUMBER:

NJD0020071517

SPILL PREVENTION PLAN - (Continued)

WASTE SOLVENT SPILL ACTION PLAN

1. Immediately notify appropriate management personnel as outlined in Emergency Action Ptan (General).

2. Absorb spill with some absorbent medium. Typical mediums are: hazorb, absorball or sorbent (3M).

3. Shovel up spill and absorbant medium into drum marked Hazardous Waste with exact contents of spill noted.

SPILL PREVENTION PROGRAM (Continued)

TRAINING PROGRAM

1. All responsible management and supervisory personnel will receive overall spill prevention and control training.

   (Responsible person: Plant Manager)

2. All hourly personnel will receive general emergency response and training specific to their work area.

   (Responsible person: Plant Manager)

3. Frequency of future training will be administered in accordance with the overall plant safety program, but at least once every two years.

   (Responsible person: Personnel Manager)

4. After any spill incident, there will be an in-plant review for all supervisors and operators.

   (Responsible person: Plant Manager)

SPILL PREVENTION PLAN - (Continued)

EPA ID NUMBER: NJD0020071517

SPILL REPORTING PROCEDURE:

If you have a spill of a hazardous substance in a reportable quantity to the out of plant environment call:

	Name	Home Phone	Office Phone
1.	RCRA Plant Emergency Coordinator		
	William Griffin	(201) 663-1424	(201) 438-4046
2.	(Alternate)		
	Ron Malenky	(201) 665-0833	(201) 438-4046
3.	1st Shift		
	R. Ewert	(201) 335-7596	(201) 438-4046
4.	2nd Shift		
	J. Mulee	(201) 488-0316	(201) 438-4046
5.	3rd Shift		
	R. Biamonte	(201) 935-5327	(201) 438-4046
6.			

For spills of solvent or fuel oil (over 1,000 gallons) the agencies to call are given under the specific spill procedures.

Responsible person: Plant Manager William Griffin RCRA

Plant Emergency Coordinator: William Griffin

Exhibit F

RECON SYSTEMS INC.
ROUTE 202N, P.O. BOX 460, THREE BRIDGES, N.J. 08887
201-782-5900
NEW ENGLAND 617-752-4217 PENNSYLVANIA 215-433-5511

D R A F T

R E P O R T ON

UNDERGROUND STORAGE TANK REMOVAL ACTIVITIES

at

SUN CHEMICAL CORPORATION
General Printing Ink Division
East Rutherford, New Jersey

ECRA Case No. 86956

RECON Project No. 1315

October 14, 1988

1315.UGST/RA 9.21.88

RECON SYSTEMS, INC.

Route 202 North, P.O. Box 460
Three Bridges, N.J. 08887
201-782-5900

New England 617-752-4217 Pennsylvania 215-433-5511

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1.0 INTRODUCTION

Five (5) underground storage tanks (UST) were removed and one (1) abandoned in place during activities at the East Rutherford General Printing Ink site. Removal activities began on July 27, 1988 and were completed during August 1988. An above ground diked tank farm was constructed over the area immediately after the excavations had been backfilled.

Post excavation soil samples were collected as each phase of tank removal was completed. Twenty-eight (28) petroleum hydrocarbon (PHC) soil samples and seven (7) base/neutral soil analyses (BNA) were performed. Analyses results indicate that some PHC concentrations above ECRA guidelines remain in place. However, these soils detected to contain these levels were left in place in order to maintain the structural integrity of buildings, existing dike foundations, and an adjacent railroad siding.

2.0 UNDERGROUND STORAGE TANKS INVOLVED

Figure 1, Post Excavation Sampling (Appendix I) details the original locations of the tanks removed and the one abandoned in place. Table 1, Underground Tank Inventory, lists the tanks involved along with their dimensions, capacities, registration numbers, contents and construction.

Tanks T-6F, T-9, T-10A, T-21 and T-22 were removed. Tank T-8 was abandoned in place. The Standard Reporting Forms for the Removal/Abandonment of Underground Storage Tanks were filed with the Division of Water Resources and are also enclosed in Appendix IV of this report.

3.0 CONTRACTORS

Kramer Environmental was contracted to organize and supervise all tank removal activities. Pro-Chem Inc. were retained as the mechanical contractors responsible for pipe fitting, tank opening, and tank cutting. Olsen and Hassold, Inc. performed the tank cleaning and disposal services. RECON SYSTEMS, INC. provided overall project management responsibilities including documentation, analyses, and final reporting.

4.0 CHRONOLOGY OF EVENTS

A detailed chronology of events is included in Appendix II. A photographic record of activities is also included in Appendix II. The photographs are numbered and are referenced in the chronology.

In general, fourteen (14) days (June 27, 1988 - July 19, 1988) were dedicated to tank removal activities, three of which involved fabricating and erecting overhead supply line supports. All tanks that were to be removed were cleaned during the first two days in accordance with the procedures described in the American Petroleum Institute Bulletin No. 1604, Recommended Practice for Abandonment or Removal of Used Underground Storage Tanks.

The following is a brief summary of major tank removal events.

Tank T-21 was removed on Day 2 and Tank 6F was removed on Day 3. A support fabricated by Pro Chem from steel I-beams was constructed and installed during Days 3 - 6. This beam was necessary to support the overhead supply lines running from the diked tank farm to the south of the excavation area over to the main building. The stanchion normally supporting these lines was undermined while pulling Tank T-22. Tanks T-22 and T-9 were removed on Day 7. The area at the northwest corner of the excavation was temporarily backfilled at this time to support the railroad tracks.

Tank T-8 was cleaned and prepared for abandonment on Day 8 (discussed in more detail later). The top was removed from T-10A, the underground vault, on Day 9. The hole left by removing T-6F was backfilled on Days 9 - 10 after pumping out all oily water. The steel liner and concrete walls were removed on Days 10 - 13. The floor of this vault (approximately 25" thick) was left in place after receiving approval to do so from the NJ DEP (letter dated July 20, 1988, Appendix VI).

After all tanks were removed, the excavation was cleaned of all backfill and residual soil. At this time, Henry Cheval Construction, Inc. replaced Kramer Environmental as the principal contractor. The excavation left by removing T-10A, T-22, T-9 and the contaminated soil adjacent to the existing tank farm and railroad tracks (Figure 1) was backfilled using 2" crushed stone and compacted in preparation for construction of the above ground diked tank farm. This new tank area incorporated a portion of the existing farm plus the tank removal excavation (as noted above) and an additional excavated area.

5.0 TANK ABANDONMENT

Standard Reporting Forms for the Removal and/or Abandonment of Underground Tanks have been filed with the NJ DEP Division of Water Resources and can be found in Appendix IV of this report.

Tank T-8 is situated under the south wall of the pump room located on the southwest side of the building. The tank is approximately seven feet (7') in diameter and twenty-five (25') in length. The tank lays parallel with the wall and about half of its diameter is under the wall. Upon determining these facts a structural engineer was retained to inspect the site conditions and building integrity versus removal of the tank. (see Thor Engineering July 26, 1988, Appendix VI). Subsequently plans were designed to abandon this tank in place.

The tank was cleaned according to API guidelines. A storm sewer line (which originally ran diagonally across the area of the tank removal excavation) was relocated to run through T-8. The ends of the tank were cut out and a 12" diameter concrete pipe constructed through the tank connecting a new clean out/manhole with the existing storm sewer system between the railroad tracks. Prior to placing this line, five cinder block columns and two lolly columns (screw jacks) were position in the tank before removing the ends to insure the tank did not collapse. The bottom half of the tank was then filled with 2" diameter crushed stone. The top half of the tank was filled with concrete when the foundation of the new tank farm was poured.

6.0 POST EXCAVATION SAMPLING

Table 2, Summary of Post Excavation Sample Results, lists all post excavation samples collected during tank removal activities along with field and laboratory numbers, date, sample depth, and petroleum hydrocarbon and base/neutral concentrations. Field and travel blank information is also included on Table 2.

Figure 1, Post Excavation Sampling, shows the locations of all samples. No samples were collected in the interior of the excavation because the water table occurred at a depth of approximately eight (8') feet below grade. The bottom 6-12" of each tank was seated in groundwater.

All post excavation samples were collected from the depth interval 8-8.5' below grade. Samples were collected at the base of the sidewall and approximately one for every ten feet of sidewall length. Samples were collected using a decontaminated stainless steel Soil Conservation Service manual bucket auger.

Twenty-eight (28) petroleum hydrocarbon analyses (PHC) and seven (7) base/neutral analyses (BNA) were completed on the post excavation samples. Nineteen (19) of the twenty-eight (28) samples resulted in PHC concentrations above the suggested ECRA cleanup level of 100 ppm PHC. The nine (9) samples which were clean were located at the southeast side and corner of the T-6F excavation and in the southwest corner of the T-9 excavation adjacent to the dike farm and railroad tracks.

In a letter from the NJ DEP dated May 11, 1988 it was advised that the NJ DEP would consider limiting soil excavations to maintain the structural integrity of adjacent buildings only if the remaining soil is adequately characterized (i.e., post excavation sampling). A structural engineer was constructed to make inspections during excavation activities and to make recommendations concerning the limits of those excavations in order to maintain structural integrities.

The letter from Mr. Ramon Thaler, Thor Engineers, in Appendix VI of this document, addresses these areas. Contaminated soil was left in place adjacent to the older diked tank farm, the railroad tracks, and adjacent to Tank T-8 and the wall of the pump room.

Contaminated soil was also left in place at the northeast sidewall of the T-10A excavation. Soil contamination in the T-10A area northeast sidewall will be addressed in the final ECRA Cleanup Plan.

Tank T-21 is located in the corner of an alcove on the northwest side of the building. A storage silo was also located in this corner (see Figure 1). Tank T-21 was also removed at which time a concrete pad was discovered. The base of the tank was located approximately six (6') feet below grade. The foundation of the adjacent building extended only 4.25' below grade. Mr. Thaler (Thor) also advised that no additional soils be removed after the tank was removed, and that the excavation should be immediately backfilled in order to maintain the integrity of the building walls. Field work was completed in this manner.

7.0 BACKFILL AND WASTE DISPOSAL

Approximately 1,400 tons (61 loads, 23 tons per tandem load) of non-hazardous oil contaminated soil was sent to Modern Landfill, Model City, New York for disposal. Waste manifests, Bill of Ladings, weight tickets, and RCRA Waste Classification Analysis Reports are located in Appendix V.

Approximately 1,300 cubic yards of backfill was used to fill the excavations resulting from tank removal activities. Half of this volume was 2" crushed stone and half was documented as identifiable "clean" fill. Both stone and soil fill materials originated from Bershire Sand and Stone Company, Inc., Lake Swannanoa, New Jersey. Analyses performed on this fill by Supratech Labs, Inc., Wayne, New Jersey is provided in Appendix V.

TABLE 1

Underground Tank Inventory

at

SUN CHEMICAL CORPORATION
East Rutherford, New Jersey

Tank Number	Registration Number	Capacity	Dimension	Contents/ Construction
T-8	E014A	10,000 Gallons	7' dia. x 25'	Ink Oil/Steel
T-9	E014B	12,000 Gallons	8' dia. x 32'	Ink Oil/Steel
T-10A	E015	40,000 Gallons	30' x 30' x 8'	Ink Oil/Steel Liner and Concrete
T-6F	E016	25,000 Gallons	10' dia. x 38'	No. 2 Fuel Oil/Steel
T-21	E021	500 Gallons	4' dia. x 5'	Ink Sludge/Steel
T-22	E022	10,000 Gallons	7' dia. x 25'	Ink Sludge/Steel

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TABLE 2

Summary of Post Excavation Sample Results

SUN CHEMICAL CORPORATION
East Rutherford, New Jersey

RECON Project No. 1315

RECON Field No.	Lab No.	Date	Depth	PHC (ppm)	B/N (ppm)*
T-21/1	11681	6/28/88	5.5-6'	47,300	1.2
T-21/2	11682	6/28/88	5.5-6'	91,100	
T-21/3	11683	6/28/88	5.5-6'	1,930	
T-21/4	11684	6/28/88	5.5-6'	61,100	
FIELD BLANK	11685	6/28/88		ND	ND
TRIP BLANK	11686	6/28/88		ND	ND
T-6F/1	11701	6/29/88	8-8.5'	ND	
T-6F/2	11702	6/29/88	8-8.5'	39	
T-6F/3	11703	6/28/88	8-8.5'	29	ND
T-6F/4	11704	6/28/88	8-8.5'	ND	
T-6F/5	11705	6/29/88	8-8.5'	<25	
T-6F/6	11706	6/29/88	8-8.5'	11,500	3.43
T-6F/7	11707	6/29/88	8-8.5'	498	
FIELD BLANK	11700	6/29/88		ND	ND
T-9/1	11784	7/8/88	8-8.5'	9,840	4.65
T-9/2	11785	7/8/88	8-8.5'	16,800	
T-9/3	11786	7/8/88	8-8.5'	6,020	
T-9/4	11787	7/8/88	8-8.5'	11,500	
T-9/5	11788	7/8/88	8-8.5'	24,600	
T-9/6	11789	7/8/88	8-8.5'	118,000	51.88
TRIP BLANK	11782	7/8/88		ND	ND
FIELD BLANK	11783	7/8/88		ND	ND
T-9/7	11814	7/11/88	8-8.5'	6,580	
T-9/8	11815	7/11/88	8-8.5'	ND	ND
T-9/9	11816	7/11/88	8-8.5'	33	
T-9/10	11817	7/11/88	8-8.5'	191	
T-9/11	11818	7/11/88	8-8.5'	424	ND
FIELD BLANK	11813	7/11/88		ND	ND
TRIP BLANK	11812	7/11/88		ND	ND

Table 2 (cont'd)

RECON Field No.	Lab No.	Date	Depth	PHC (ppm)	B/N (ppm)*
T-10/1	11877	7/15/88	8-8.5'	2.770	
T-10/2	11878	7/15/88	8-8.5'	<25 ND	
T-10/3	11891	7/19/88	8-8.5'	240	
T-10/4	11879	7/15/88	8-8.5'	11,100	
T-10/5	11880	7/15/88	8-8.5'	11,700	
T-10/6	11890	7/19/88	8-8.5'	1,660	
FIELD BLANK	11876	7/15/88		ND	
FIELD BLANK	11889	7/19/88		<0.5	
TRIP BLANK	11875	7/15/88		ND	
TRIP BLANK	11888	7/19/88		ND	

*Does not include values also found in method blank or found below method detection limit.

ND = Non Detectable

Exhibit G

RECON SYSTEMS, INC.

Route 202 North, P.O. Box 460
Three Bridges, N.J. 08887-0460
201-782-5900

New England 508-752-4217 Pennsylvania 215-433-5511
Connecticut 203-293-1212 New Hampshire 603-431-7500
FAX 201-782-0072

REPORT ON THE RESULTS OF CLEANUP PLAN IMPLEMENTATION

at

SUN CHEMICAL CORPORATION
390 Central Ave.
East Rutherford, NJ

ECRA Case No. 86956

Prepared by

Stephen E. Laney, CPG
Manager, Site Investigations

Alan H. Uminski
Geologist

RECON SYSTEMS, INC.
Route 202 North
Three Bridges, New Jersey

RECON Project No. 1625

September 26, 1990

1625.CPI 9.18.90

RECON SYSTEMS, INC.

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Connecticut 203-293-1212 New Hampshire 603-431-7500
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1.0 INTRODUCTION

A proposed CLEANUP PLAN (CUP) was submitted to the NJ DEP on February 28, 1989 for the SUN CHEMICAL CORPORATION ("SUN CHEMICAL"), East Rutherford, NJ site. An AMENDED CLEANUP PLAN addressing Area C was submitted to the NJ DEP on October 30, 1989 and was further amended by letter dated February 14, 1990.

On March 1, 1990, the NJ DEP issued a letter granting partial approval of the CUP in respect to the soil remediation proposal. The letter stated that additional information was required before a decision could be made regarding the necessity for any groundwater cleanup.

This report documents the results of implementing the soil remediation proposed in the CUP. Included in this report is a chronology of events, post-excavation sampling results, maps illustrating the excavation limits and sample locations, manifests and receipts for waste soils and backfill, and other related information.

Also included in this report is information related to the installation and sampling of three (3) additional monitoring wells and the replacement of MW-4. The thorough well search and the logs for the post-excavation samples collected during the previous underground storage tank removal activities as requested in the March 1, 1990 DEP letter are also included in the appendices of this report.

2.0 ENVIRONMENTAL CONCERNS

Five (5) Areas of Environmental Concern (AEC) involving petroleum hydrocarbons (PHC) in soils are involved in this cleanup. In addition, groundwater quality involving dissolved PHC in the water table aquifer was also investigated and addressed.

2.1 Previous Sampling

The SITE EVALUATION SUBMISSION (SES) for the site was submitted to the NJ DEP on February 19, 1987. The SES included a proposed Sampling and Analysis Plan (SAP) based partially on the results of seven (7) soil samples collected prior to triggering ECRA.

In the document RESULTS OF SAMPLING AND ANALYSIS PLAN PHASE I (SAP I) AND PHASE II DELINEATION SAMPLING (SAP II) submitted to the NJ DEP on May 26, 1988, the results of implementing the SAP were reported. Soil borings and sampling and the installation and sampling of four (4) overburden monitoring wells identified three (3) areas where soil levels of PHC exceeded DEP ECRA surrogate and one (1) area onsite where levels of PHC in the groundwater exceeded DEP ECRA groundwater surrogate action levels. Additional delineation sampling was also proposed.

In the document RESULTS OF PHASE II DELINEATION SAMPLING (SAP II) submitted on January 15, 1989, sufficient soil sampling results were reported to delineate areas requiring soil remediation. The parking area on the southeast side of the plant (Area A) contained three zones of PHC contaminated soil beneath the asphalt and a large area on the northwest side of the plant (double railroad spur) was of concern.

Five (5) underground storage tanks were removed and one (1) abandoned in place during the Summer of 1988. The results of those activities and post-excavation sampling were reported to the NJ DEP on October 14, 1988 in the document entitled REPORT ON UNDERGROUND STORAGE TANK REMOVAL ACTIVITIES. T-series lithologic logs for tank removal activities are included in Appendix XI of this document.

In the proposed CLEANUP PLAN (February 28, 1989) and amendment (October 30, 1989), the three (3) hotspots in Area A and one (1) hotspot in Area C as well as the top 12" of gravel in Area C were proposed to be excavated and backfilled. This document reports the results of implementing the NJ DEP approved soil remediation plan.

2.2 Post Excavation Sampling

Table 1, Summary of Post Excavation Soil Sampling and Analysis Results, lists all post excavation samples collected during soil excavation activities relating to this CUP implementation along with field and laboratory numbers, date, sample depth interval, and petroleum hydrocarbon concentrations.

Figure 1, Soil Excavation Areas and Post-Excavation Sample Analysis Results, show the locations of all post-excavation soil samples and monitoring well locations. Figure 1 also shows field numbers, petroleum hydrocarbon concentrations, base neutral concentrations, sample depth and sample date for post excavation samples involved in this cleanup.

2.2.1 Area A (Zones I - III)

Fifty-one (51) post-excavation soil samples and eleven (11) field blanks were collected during the period from April 23, 1990 to August 16, 1990 and analyzed for total petroleum hydrocarbon (US EPA Method 418.1). Samples were collected at the base of the sidewalls at an interval of approximately one every twenty (20) feet of sidewall length. Samples were also collected at the ends of the excavation, and along the center line of the excavation where groundwater was not encountered.

Soil samples were collected by manually coring a 6-inch plug of soil from the base of the open sidewall or base of the excavation using a 3-inch diameter stainless steel decontamination SCS manual bucket auger. Samples were placed into pre-cleaned 250 ml glass jars. Chain-of-custody documentation and lithologic logs for the sample interval were prepared and are contained in the appendices of this report.

Post-excavation soil samples were analyzed on an emergency rush basis with verbal confirmation in two to three days. Eleven (11) of the fifty-one (51) soil samples resulted in petroleum hydrocarbon concentrations above the NJ DEP approved 500 ppmw clean up level. These results indicated that further excavation was necessary. Areas requiring further soil removal where no buildings or underground utilities existed were again excavated and resampled.

Five (5) sample locations remain above the approved 500 ppmw clean up level. Four (4) of the sample locations (numbers 1,2,14 & 19) are at the north side of Excavation Zone 2 adjacent to the existing building and underground gas utility line. The fifth location is adjacent to underground electric utilities on the west side of excavation Zone 1, (number 4). It was recommended by a licensed engineer, Mr. Arthur Straubing, STRAUBING AND RUBIN, South Orange, NJ, not to proceed further at these locations in order to maintain necessary structural support. These areas have been backfilled and repaved, eliminating any potential for dermal exposure.

Post excavation samples #2, #14, and #19 in Zone 2 were collected within one (1′) foot of the building because a solid foundation did not threaten to undermine the structure. Sample #4 in Zone 1 and samples #1 and #2 in Zone 2 were discontinued within five (5′) feet of structures which did not have secure footings (utilities, spill collection pad) to prevent undermining.

2.2.2 **Area C**

Area C is an area 25 feet wide by 450 feet long which contains two (2) railroad spurs. Track 1 is the railroad spur adjacent to the west property line and Track 2 is adjacent to the building. The "hotspot" in the area of previous boring C-2 was proposed in the amended CUP to be excavated and post excavation samples taken. As proposed and approved in the CUP this area (Zone 4) was excavated and PHC contaminated soil removed to a depth of four feet below grade from between the railroad spur and the dike wall. A concrete footing located in the middle of the excavation and connected to the base of the dike wall prevented soil removal below a 1.5′ depth (see Figure 3, Detail of Area C). Post excavation sample results from the depth interval 4-4.5′ on either end of and adjacent to this footing resulted in PHC concentrations below the cleanup level.

A soil sample collected during the installation of monitoring well MW-6 (boring 3) from the same 4-4.5′ interval was also clean. Any PHC contaminated soil in the area of Zone 4 (C-2) has now been removed. Please see photograph 17/4 in Appendix IV for a view of the open excavation. The four (4) soil samples from Area C Zone 4 were also analyzed for base neutrals (US EPA Method 625+15).

The top twelve (12) inches of stained crushed rock within the entire area C was excavated to visibly clean traprock. Portions of the tracks were removed where visibly contaminated traprock was encountered or the railroad spur required maintenance. Approximately 120 feet of Track 1 and 80 feet of Track 2 was removed or repaired by Railroad Maintenance of Paterson, NJ.

Nine (9) post-excavation soil samples were collected at the base of the excavation and sampled for PHC on an emergency basis. Two (2) of the nine (9) samples were above the 500 ppmw action level. These samples (PE-3 and PE-4, see Figure 1) are located on the south end of the tracks in the ink oil unloading area. Oily gravel was removed to a depth of 30" below grade when the section of Track 2 was removed as shown on Figure 3, Detail of Area C. Clay fill is located under the gravel.

Along the entire length of Area C, between Track 1 and Track 2 exists a buried storm water sewer drainage system. The sewer pipes are approximately 2.5 to 4 feet below grade. During the removal of the tracks and gravel, the sewer pipes were encountered and the excavation was discontinued at the top of the pipes. Post excavation samples PE-3 and PE-4 were taken from above the buried sewer.

The 12 inch deep excavation was backfilled with 6 inches of 3/4 inch traprock and completed with 3/8-inch traprock gravel. The 30-inch deep excavation was backfilled with 18 inches of 1 1/2 inch diameter traprock, 6 inches of 3/4 inch diameter traprock and completed with 3/8 inch clean traprock. All traprock was clean, virgin material from local quarries.

Independent of any NJ DEP requirements or the Partial Cleanup Plan approval, SUN has installed a preventative environmental control system in this area.

A spill collection system consisting of drip pans, drain pipes and asphalt encapsulation were installed by Cheval Construction Co. Six (6) drip pans were placed under the loading portion of the railroad oil tanker cars. A series of drains were placed between Track 1 and 2 approximately one foot below grade.

The drains are spaced approximately 13 feet apart over a length of 450 feet. The drainage pipes are constructed of PVC, schedule 35, four (4) inch inside diameter. Pneumatic pumps placed on top of the diked area walls lift water into the diked area from the PVC drains. The entire area is encapsulated with an asphalt surface

with the grade pitching towards the PVC drains. The storm sewer drains and manholes are surrounded by four (4) inch berms preventing precipitation from immediately entering the sewer system. Please refer to Figure 3, Detail of Area C, for a map of the collection system.

The system collects storm water initially from the PVC drains through the pneumatic pumps discharging into the above ground diked storage tank farm. The water would than be pumped from the diked area to the storm sewer system under normal (no spill) situations. If a spill occurs, any carbon or PHC contaminated water will be removed by a liquid disposal contractor from the diked tank farm area.

2.3 Groundwater Investigation

Four (4) monitoring wells were installed on site between April 17, 1990 and June 7, 1990. Three (3) of these wells (MW-5, MW-6, MW-7) were installed pursuant to the DEP letter dated March 1, 1990. One (1) well (MW-4R) was built as a replacement well for MW-4 which was removed during the excavation of Zone I in Area A. These wells were screened across the water table and built as unconsolidated flush-mount monitoring wells according to NJ DEP specifications.

Monitoring wells MW-4R, MW-5, and MW-6 were installed by RECON SYSTEMS using a Mobile B-53 drill rig and the hollow stem auger drilling method. Monitoring well MW-7 was installed by Cook Environmental, Trevose, PA, using an Archer detachable-mast drill rig using the hollow stem auger method.

Lithologic/well construction logs can be found in Appendix VIII of this document along with As-Built-Certification Forms (Form A). PVC screens and risers were used for well construction material with 2-inch and 4-inch diameters. Table 3, Summary of Additional Monitoring Well Data, lists information pertinent to each well. All four (4) monitoring wells were developed by centrifugal pumps with groundwater discharged by overland flow until sediment free.

2.3.1 Groundwater Sampling Procedures

Fourteen (14) days after development, each well was purged of three volumes of water. Groundwater samples were retrieved using a decontaminated teflon bailer with a clean cotton cord. All samples were put into clean decontaminated bottles provided by either RECON SYSTEMS or ACCUTEST laboratories. Field blanks and trip blanks were prepared for each day of sampling. All samples were collected according to the "NJ DEP Field Procedures Manual For Water Data Acquisition".

2.3.2 Groundwater Analytical Results

Groundwater samples were collected and analyzed for the parameters requested in the March 1, 1990 DEP letter. Table 2, Summary of Groundwater Sampling Results, lists the total volatile organic compounds, petroleum hydrocarbons, base neutrals, pH, and total dissolved solid (TDS) concentrations detected in wells MW-4R, MW-5, MW-6, and MW-7. The monitoring results were generally consistent with previous sample results.

Figure 2, TPHC Isopleth Map for Groundwater, shows the TPHC concentrations detected in groundwater including results from all seven wells onsite. Concentrations mapped for MW-4R, MW-5, MW-6, and MW-7 are from Table 2 in this report. Concentrations for MW-1, MW-2, and MW-3 are from the previous sampling event (11-22-88) reported in the CUP (Table 1, Summary of Groundwater Fingerprinting Analysis Results).

Benzene, toluene and xylene (BTX) compounds were detected in the groundwater sample from MW-7. Total BTX concentrations of 1.47 ppmw were reported. No volatile organic compounds were detected in the remaining six (6) wells onsite.

3.0 ALTERNATIVE REMEDIAL ACTIONS

Soil excavations and backfilling were approved as the prime remedial action plan for Area A and Area C. However, it should be noted that both areas were sealed by paving with asphalt after soil remediation. Area C was not previously paved. Paving is considered encapsulation which was approved by the NJ DEP and is a form of alternative remediation.

Bioremediation was investigated as an alternate technology to be used in the area around the previous underground storage tank locations as requested in the NJ DEP letter dated July 28, 1989. The insitu contractors who reviewed the site could not guarantee that bioremediation would work or that it would meet NJ DEP approved cleanup levels. Accordingly, soil excavation, backfilling, and paving were proposed and approved by the NJ DEP.

4.0 CLEANUP LEVELS ACHIEVED

In the March 1, 1990 letter, the NJ DEP agreed that the cleanup levels to be achieved during soil remediation was 500 ppmw total petroleum hydrocarbons and 20 ppmw base/neutral compounds.

The approved cleanup level was achieved in Area A except in the case of five (5) of the fifty-one (51) post excavation samples as previously discussed in Section 2.2.1 of this document. Due to utilities (gas and electric lines) and structural considerations, no further excavation can take place at these few locations.

Area C, Zone 4 has reached the cleanup levels for PHC and BN concentrations. Two (2) samples from the south end of the tracks in the ink oil unloading area had PHC concentrations above the 500 ppmw level (PE-3 and PE-4, see Figure 1).

In the amended CUP, SUN proposed 10 ppmw total petroleum hydrocarbons as the cleanup level to be achieved during groundwater remediation. Since additional investigations were necessary prior to determining if groundwater cleanup would be required, the NJ DEP did not respond to this proposed action level. Recent groundwater monitoring results were consistent with and similar to prior results. Based upon recent sampling data, another evaluation of cleanup levels should be made after discussions with representatives of the NJ DEP and SUN CHEMICAL.

5.0 WORK PLAN AND HEALTH AND SAFETY PLAN

The Work Plan and Health and Safety Plan (HASP) are contained in the approved Cleanup Plan for the site. All work was performed in Level D personal protective status.

6.0 POST REMEDIATION SAMPLING AND MONITORING

No post remediation soil sampling is proposed at the site because proposed cleanup levels were achieved, except where excavation was physically limited and in two (2) samples in the railroad track area (Area C, samples PE-3, PE-4). Additional alternative remedial action has also been utilized by encapsulating the areas of concern.

It is proposed that no groundwater remediation be performed onsite, but that groundwater quality be monitored for a one (1) year period on a quarterly basis to confirm the stability of the identified target compounds. This monitoring program is appropriate for a site in a mixed industrial, commercial, and residential area which does not use groundwater for drinking purposes. The target compound proposed for monitoring at all wells is PHC. It is proposed that MW-7 also be monitored for BTEX compounds. It is proposed that all wells will be sampled during the first sampling event after which only the wells showing elevated levels of PHC (>10 ppmw) will be sampled. Hydraulic monitoring will continue on all wells during each sampling event.

As concluded in the detailed well record search as contained in Appendix X of this report, there are no domestic or public supply wells presently in use within a one (1) mile radius of the site. The only operating wells are monitoring and commercial wells used for industrial cooling purposes. Therefore, the TPHC detected in the groundwater onsite does not pose a health risk to the community since the groundwater is not used for human consumption and since there is no evidence that any target compounds are migrating.

Encapsulation of Area C (railroad siding) will prevent future recharge through this area and prevent mobilization of potential TPHC contained in soils and groundwater. Encapsulation will restrict the potential for plume migration downgradient and offsite.

7.0 CONTRACTORS

Henry Cheval Construction Company of East Rutherford, New Jersey was contracted for handling the soil, which included excavation, stockpiling and loading waste hauling trucks. Cheval Construction was also responsible for fencing off open excavations and covering stockpiled soil with clear 6 mil thick plastic. Other responsibilities included organizing delivery of clean backfill and asphalt.

American Waste Management Services, Inc. of Horsham, Pennsylvania was contracted for soil disposal and transportation services. The excavated soil was delivered to the American Landfill in Waynesburg, Ohio. Waste transportation trucks were from BES Environmental Specialists, Inc., Dart Trucking Company, Inc., Merola Enterprises, and Horwith Trucks, Inc..

Nappi Trucking of Matawan, New Jersey was contracted for delivery of liquid waste tankers. Water pumped from the excavations was delivered to Lionetti Oil Company in Newark, New Jersey for liquid disposal.

Sam Stothoff Drilling Company of Flemington, NJ was contracted to abandon a 16-inch diameter well casing that was discovered during excavation activities.

Railroad Construction of Paterson, NJ was contracted to remove, repair and replace railroad tracks and ties from Track 1 and Track 2 in Area C.

Cook Environmental Services of Trevose, PA. was contracted to install monitoring well MW-7 using an Archer detachable-mast drill rig, under the supervision of RECON SYSTEMS.

RECON SYSTEMS, INC. of Three Bridges, New Jersey provided overall project management responsibilities including documentation, sample collection, analyses, monitoring well installation, and final reporting.

8.0 BRIEF CHRONOLOGY OF EVENTS

A detailed chronology of events is included in Appendix IV . A photographic record of activities is also included in Appendix IV. The photographs are numbered and are referenced in the chronology.

In general, thirty-five (35) days (April 23, 1990 - September 19, 1990) were dedicated to soil excavation activities, three of which involved the installation of four (4) monitoring wells. A total of sixty-four (64) soil samples were collected and four (4) wells were sampled.

Five (5) locations at the site where excavated; three (3) zones in Area A (parking lot) and two zones (Zone 4 hotspot and top 12") in Area C (railroad siding). Approximately 2900 tons (125 loads, 23 tons per tandem load) of non-hazardous oil contaminated soil was excavated by Cheval and transported by American Waste Management Services for disposal at the American Landfill in Waynesburg, Ohio. Analytical requirements for disposal in Ohio are included in Appendix V of this report.

During excavation activities in Zone 1 of Area A, monitoring well MW-4 was removed and a previously undocumented debris filled 16-inch diameter steel well casing was discovered. The 16-inch well was abandoned by cutting off a section of the casing, removing bricks, gravel and soil, and filling with cement. This was witnessed by a NJ well driller certified for well abandonment. The well abandonment form can be found in Appendix IX.

When groundwater was encountered during excavating, it was pumped into NAPPI Trucking tankers and disposed of as liquid waste. Approximately 6000 gallons of water was delivered to Lionetti Oil Company in Newark, NJ. Receipts are located in Appendix VII of this report.

During the excavation of Area C, an accumulation of ink oil required that 120 feet the railroad siding from Track 2 be removed to properly excavate the area. 80 feet of Track 1 was also removed at this time due to general track maintenance, 15 railroad ties needed to be replaced.

9.0 BACKFILL AND WASTE HANDLING

Approximately 2,900 tons (125 loads, 23 tons per tandem load) of non-hazardous oil contaminated soil was sent to the American Landfill, Waynesburg, Ohio for disposal. Waste manifests and Bill of Ladings are located in Appendix VI.

Approximately 2,800 cubic yards of certified clean backfill were used to fill the excavations in Area A. Half of this volume was 2-inch crushed stone and half was documented as clean fill. The sand fill originated from various sand pits in the North Jersey area and was supplied by The John Donkersloot & Son Company. The 2-inch crushed stone originated from local traprock quarries. Approximately 280 cubic yards of clean backfill were used to fill the excavation in Area C. Approximately 175 tons of FABC asphalt topping were applied to encapsulate Area C. Receipts for the backfill and certification are located in Appendix VII.

10.0 CLEANUP COSTS

Total costs incurred during the cleanup activities performed at the SUN East Rutherford, NJ site are as follows:

TASKS	$
Underground Tank Removals	450,000.
Tank Replacement	970,000.
Soil Removal, Disposal, and Backfill	500,000.
Environmental & Engineering Consultants	530,000.
TOTAL:	$2,450,000.00

11.0 CONCLUSIONS AND RECOMMENDATIONS

Soil remediation activities have been finalized according to the procedures proposed in the approved Cleanup Plan. Soil in "hotspots" exceeding 500 ppmw of TPHC were excavated and backfilled with clean certified backfill. Areas A and C were then encapsulated with asphalt to prevent impact from future production activities. A spill collection system was installed in Area C to prevent future environmental impact due to spillage. No further actions are proposed regarding soil remediation at the site.

Groundwater quality has been affected by dissolved TPHC in the water table along the rail siding on the upgradient (northwest) side of the property. Elevated concentrations of PHC (74.6 ppmw in MW-7) and VOC (1.47 ppmw) are restricted to this area. TPHC concentrations downgradient of the building are generally less than 10 ppmw in groundwater. No VOC were detected in groundwater samples collected elsewhere onsite.

It is proposed that groundwater quality be monitored on a quarterly basis for a period of one year under the New Jersey Pollutant Discharge Elimination System for Discharges to Groundwater (NJPDES-DGW). If after one year the target compounds are determined not to be moving down hydraulic gradient, then a petition will be filed to terminate the permit, monitoring will cease, and the wells will be properly abandoned.

If after one year of monitoring any plume is found to significantly increase in concentration or is moving down gradient, then an additional year of monitoring is proposed and the permit will be re-evaluated at the end of the second year. Based upon available information, no additional wells or groundwater remediation is proposed at this site.

Exhibit H

Recon Systems Inc.
5 Johnson Drive, PO Box 130
Raritan, NJ 08869-0130
908 526-1000/FAX 908 526-7886

REPORT
RECON Project No.
1315A
April 30, 1991

FINAL REPORT

Prepared for

SUN CHEMICAL CORPORATION
135 West Lake Street
Northlake, Illinois 60164

Attn: Gary Andrezjewski

at

SUN CHEMICAL CORPORATION
390 Central Avenue
East Rutherford, New Jersey

Project Identification:

ECRA Case No. 86956

Prepared by

Site Investigation/Remediation Division

Alan H. Uminski (Extension 413)
Geologist

Stephen E. Laney (Extension 457)
Manager, Site Investigation/
Geology/Hydrogeology

Recon Systems Inc.
Raritan, NJ 08869-0130

TABLE OF CONTENTS

1315A.FR 4.15.91

Recon Systems Inc.
Raritan, NJ 08869-0130

1.0 INTRODUCTION AND SUMMARY

This report describes the work performed and the sampling results obtained in order to implement the NJDEP approved Cleanup Plan at the SUN CHEMICAL CORPORATION site located at 390 Central Avenue, East Rutherford, Bergen County, New Jersey since December 21, 1990.

The NJDEP issued a Cleanup Plan Approval Letter on December 21, 1990 (see Appendix IV) which requested two (2) consecutive groundwater sampling events thirty (30) days apart. Groundwater sampling parameters were volatile organic compounds (VOC) and petroleum hydrocarbons (PHC). On January 15 and 16, 1991, four (4) monitoring wells were sampled for VOCs, and two (2) wells were sampled for PHCs. Two (2) monitoring wells were sampled for VOCs and PHCs on February 16, 1991.

VOCs ranged from none detected to 0.03 parts per million by weight (ppmw) and PHCs ranged from 146 to 37 ppmw. This data is consistent with or significantly less than prior results and supports the plan for no further action at the site.

An audit of RECONs groundwater sampling protocol was conducted by the NJDEP.

Recon Systems Inc.
Raritan, NJ 08869-0130

2.0 COSTS FOR CLEANUP SINCE DECEMBER 21, 1990

The cleanup costs since the December 21, 1990 Cleanup Approval Letter was issued has a sum total of less than $10,000. No additional review fees should be required by the NJDEP.

Consulting fees, sampling field work, and analytical costs are itemized for the months of January, February, March and April 1991, in Table 2, Costs for Cleanup Since December 21, 1990.

Consulting fees for the month of April 1991 are estimated to be approximately $500., with a four (4) month total of $2,135. Sampling field work for January through April 1991 is $1,770. and analytical costs were $5,902. Total Cleanup Plan costs for this phase of work are approximately $9,717.00.

3.0 HYDROGEOLOGIC SUMMARY

The SUN CHEMICAL site is located in the Piedmont Physiographic Province of the Newark Basin at a topographic elevation of 60 feet above mean sea level. The geology consists of Pleistocene glacial ground moraine and stratified drift overlying the Upper Triassic - Lower Jurassic Passaic Formation.

To the depth investigated at the site (approximately 20'), stratigraphy consists of 3 - 6' of clayey fill overlying coarse-grained silty sand. The coarse sand is moderately sorted and stratified.

Seven (7) shallow monitoring wells are present on the site. As directed in the NJDEP letter. Four (4) were sampled in January, 1991 and two (2) were sampled in February, 1991. Static water levels for this period range from 4 to 5 feet below grade. All the wells are screened within the unconfined or water table aquifer. The water table aquifer flows predominately to the southeast.

4.0 GROUNDWATER SAMPLING PROCEDURES

A centrifugal pump was utilized to purge three (3) volumes of water from each well. The pump was rinsed with tap water before evacuating each well. The pump discharged less than one gallon per minute. All purge water was surficially discharged.

New black, drinking water grade, polyethylene tubing was used to purge each well. After each well was purged and sampled, the tubing was discarded.

A foot valve was attached to the intake end of the tubing and was moved across the screen within the water column while purging each well. The well was not evacuated to dryness.

While wearing non-powdered PVC gloves groundwater samples were collected using a laboratory cleaned bailer with a teflon coated stainless steel leader and clean cotton cord. VOC samples were collected before PHC samples and put into clean decontaminated bottles provided by either RECON (PHCs) or ACCUTEST Laboratories (VOCs). The groundwater samples were retrieved within the two (2) hour limit for a representative sample.

Field blanks and trip blanks were prepared for each day of sampling using water and bottles supplied by each laboratory.

Ms. Kathleen Miiler of the NJDEP Industrial Site Evaluation Element conducted a field audit with Alan H. Uminski of RECON to observe groundwater sampling procedures.

5.0 GROUNDWATER ANALYTICAL RESULTS

As investigated in the NJDEP letter, groundwater samples collected from four (4) monitoring wells on January 15, 1991 and two (2) monitoring wells on February 15 and 16, 1991 were analyzed for VOCs and PHCs. Field data sheets (purge forms) are presented in Appendix I of this report.

Table 1, Summary of Groundwater Sampling Results lists the milestone dates and analytical results in parts per million for the January and February 1991 sampling events. Analytical reports and quality assurance/quality control (QA/QC) data are presented in Appendix II.

No significant VOCs were detected in any of the monitoring wells sampled.

Figures 1 and 2 are PHC isopleth maps showing concentration contours for January and February 1991.

Figure 1, Groundwater Sampling Results from January, 1991 for PHCs and VOCs, lists the concentrations of PHCs ranging from 146 ppmw from monitoring well MW-7 to 1.9 ppmw for monitoring well MW-2.

Figure 2, Groundwater Sampling Results From February 1991 for PHCs and VOCs lists the concentrations of PHCs ranging from 35.1 ppmw for monitoring well MW-7 to <0.5 ppmw for monitoring well MW-2. There has been a significant reduction (order of magnitude) in the total PHC concentrations between the two (2) sampling events.

6.0 CONCLUSIONS AND RECOMMENDATIONS

No significant VOC concentrations exists in the groundwater and the PHC concentrations are decreasing with time. No public water supply wells or domestic water wells are at risk.

RECON recommends that no further cleanup activities are necessary regarding this case. The requirements set forth in the Administrative Consent Order have been satisfied and the ECRA proceedings for this facility have been concluded. SUN requests the release of the financial assurance at this time.

7.0 CERTIFICATIONS AND SIGNATORIES

CERTIFICATIONS:

A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name William Griffin Title Plant Manager
SUN CHEMICAL CORPORATION

Signature _____ Date _____

Sworn to and Subscribed Before Me
on this _____
Date of _____ 19 ___

_____
Notary

B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq. I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name William H. Saltzman Title Vice President
SUN CHEMICAL CORPORATION

Signature W H Saltzman Date April 26, 1991

Sworn to and Subscribed Before Me
on this 26th
Date of April 1991
Vilma Zeldin
Notary
VILMA ZELDIN
Notary Public, State of New Jersey
My Commission Expires July 31, 1994

CERTIFICATIONS:

A. The following certification shall be signed by the highest ranking individual at the site with overall responsibility for that site or activity. Where there is no individual at the site with overall responsibility for that site or activity, this certification shall be signed by the individual having responsibility for the overall operation of the site or activity.

I certify under penalty of law that the information provided in this document is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name William Griffin Title Plant Manager
SUN CHEMICAL CORPORATION

Signature William Griffin Date April 28 1991

Sworn to and Subscribed Before Me
on this 22 ND
Date of APRIL 19 91

Joan Dreeman
Notary

JOAN DREEMAN
NOTARY PUBLIC OF NEW JERSEY
MY COMMISSION EXPIRES SEPT. 17, 1991

B. The following certification shall be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
3. For a municipality, State, Federal or other public agency, by either a principal executive officer or ranking elected official.

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate, or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of N.J.S.A. 13:1K-6 et seq., I am personally liable for the penalties set forth at N.J.S.A. 13:1K-8.

Typed/Printed Name William H. Saltzman Title Vice President
SUN CHEMICAL CORPORATION

Signature _____ Date _____

Sworn to and Subscribed Before Me
on this _____
Date of _____ 19 ____

_____
Notary

Exhibit I

Let's protect our earth

State of New Jersey

DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF HAZARDOUS WASTE MANAGEMENT
CN 028
Trenton, N.J. 08625-0028
(609) 633-7141
Fax # (609) 633-1454

19 JUNI 1991

JUN 14 1991

William Saltzman, Esq.
Sun/DIC Acquisition Corporation
222 Bridge Plaza South
Fort Lee, NJ 07024

Dear Mr. Saltzman:

Re: Industrial Establishment: Sun Chemical Corporation
Location: 390 Central Avenue, East Rutherford Borough, Bergen County
Block: 34 Lot: 1
Transaction: Sale of Business and Property
Cleanup Plan: September 26, 1990
Financial Assurance: Letter of Credit, # NY63214-3
The Long Term Credit Bank of Japan
ECRA Case Number: 86956

Pursuant to the authority vested in the Commissioner of the New Jersey Department of Environmental Protection ("NJDEP") by the Environmental Cleanup Responsibility Act (ECRA, N.J.S.A. 13:1K-6 et seq.) and duly delegated to the Assistant Director of the Industrial Site Evaluation Element pursuant to N.J.S.A. 13:1B-4, the referenced Industrial Establishment is considered to be in full compliance with the Act. NJDEP hereby certifies that the referenced Cleanup Plan has been implemented and completed in accordance with the terms of the December 21, 1990 Cleanup Plan approval.

This certification is based upon the satisfactory completion of the Cleanup Plan as supported by the Final Report dated April 30, 1991 and the NJDEP's final inspection on June 10, 1991. By issuing this Full Compliance Letter, NJDEP continues to reserve all rights to pursue any penalties allowable under the law for violations of the ECRA statute or regulations associated with this transaction.

Sun Chemical Corporation shall seal all monitoring wells that were installed for compliance with ECRA and shall submit the well abandonment forms to the Bureau of Water Allocation. Please be advised that this case has been referred to the Division of Water Resources for the proper abandonment and sealing of the seven monitoring wells. Please contact the Bureau of Water Allocation at 609-292-2957 for guidance.

This Notice will serve to release and return the referenced Financial Assurance and any other funds held pending compliance with ECRA.

Sincerely,

for Kenneth T. Hart, Acting Assistant Director
Industrial Site Evaluation Element

c: Dr. Edward Demarest, BEERA
George Anne Cluskey, BGWDC
Tina Layre, BEAC
Richard Kropp, DWR, Bureau of Water Allocation
Stephen Laney, Recon Systems, Inc.
Ellen Radow, Esq., Cohen, Shapiro, et.al.
Ruth Dawson, North Arlington Health Dept.